



**DEPARTMENT OF PUBLIC
WORKS AND HIGHWAYS**



Social and Environmental Management System Manual

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**LIST OF ABBREVIATIONS**

ABBREVIATIONS	DESCRIPTION
AD	Ancestral Domain
ADB	Asian Development Bank
AO	Administrative Order
BFAR	Bureau of Fisheries and Aquatic Resources
BMB	Biodiversity Management Bureau
BSWM	Bureau of Soil and Water Management
CADC	Certificate of Ancestral Domain Claim
CADT	Certificate of Ancestral Domain Title
CALT	Certificate of Ancestral Land Title
CAR	Cordillera Administrative Region
CMR	Compliance Monitoring Report
CMVR	Compliance Monitoring and Validation Report
CNC	Certificate of Non-Coverage
COC	Chain of Custody
DA	Department of Agriculture
DAO	Department Administrative Order
DAR	Department of Agrarian Reform
DE	District Engineer
DENR	Department of Environment and Natural Resources
DEO	District Engineering Office
DepEd	Department of Education
DHSUD	Department of Human Settlement and Urban Development
DMC	DENR Memorandum Circular
DND	Department of National Defense
DO	Department Order
DOE	Department of Energy
DOH	Department of Health
DOLE	Department of Labor and Employment
DOT	Department of Tourism
DOTr	Department of Transportation
DoTS	Document Tracking System
DPWH	Department of Public Works and Highways
DRAM	DPWH Right-of-Way Acquisition Manual
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
ECA	Environmentally Critical Area
ECC	Environmental Compliance Certificate
ECP	Environmentally Critical Project
EIA	Environmental Impact Assessment
EIAPO	Environmental Impact Assessment Project Office
EIARC	Environmental Impact Assessment Review Committee
EIS	Environmental Impact
EMB	Environmental Management Bureau
EMC	EMB Memorandum Circular
EMF	Environmental Monitoring Fund
EMoP	Environmental Monitoring Plan
EMP	Environmental Management Plan
EO	Executive Order
EPRMP	Environmental Performance Report Management Plan
ESSD	Environmental and Social Safeguards Division
FPIC	Free, Prior and Informed Consent
FS	Feasibility Study
GAA	General Appropriations Act
IEC	Information and Education Campaign



ABBREVIATIONS	DESCRIPTION
IEE	Initial Environmental Examination
IMA	Internal Monitoring Agent
IP	Indigenous People
IPRA	Indigenous Peoples Rights Act
JICA	Japan International Cooperation Agency
KBA	Key Biodiversity Area
KPI	Key Performance Indicators
LARRIPP	Land Acquisition, Resettlement, Rehabilitation and Indigenous Peoples' Policy
LCA	Local Conservation Area
LGU	Local Government Unit
LRA	Land Registration Authority
LWUA	Local Water Utilities Administration
MGB	Mines and Geosciences Bureau
MMT	Multi-Partite Monitoring Team
NAMRIA	National Mapping and Resources Information Authority
NCCA	National Commission for Culture and the Arts
NCIP	National Commission on Indigenous People
NCIP	National Commission on Indigenous People
NHCP	National Historical Commission
NIA	National Irrigation Administration
NIPAS	National Integrated Protected Areas System
NWRB	National Water Resources Board
OSH	Occupational Safety and Health
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PAMB	Protected Area Management Boards
PASu	Protected Area Superintendent
PAWB	Protected Areas and Wildlife Bureau
PCO	Pollution Control Officer
PD	Presidential Decree
PDP	Philippine Development Plan
PHIVOLCS	Philippine Institute of Volcanology and Seismology
PMO	Project Management Office
POW	Program of Works
PP	Presidential Proclamation
PRA	Philippine Reclamation Authority
RA	Republic Act
SEMS	Social and Environmental Management Systems
SIA	Social Impact Assessment
SMR	Self-Monitoring Report
SWIP	Small Water Impounding Projects
TIEZA	Tourism Infrastructure Enterprise Zone Authority
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UPMO	Unified Project Management Office
VAT	Value Added Tax
WB	World Bank



1 SEMS OPERATIONS MANUAL IN PERSPECTIVE

DPWH Social and Environmental Management System (SEMS) Operations Manual was launched through DPWH Department Order (DO) 245 s. 2003, in line with the policy direction of DPWH to integrate social and environmental requirements for the fast-track development of infrastructure projects. The SEMS Operations Manual shall be applied in all infrastructure projects, covered or not covered by the by the Philippine Environmental Impact Statement System (PD 1586). The Manual is intended primarily for operational use by the DPWH Project Proponents, Implementing Offices, Environmental and Social Safeguards Groups, and supporting groups.

The Manual aims to:

- a. enhance the Department's social and environmental performance.
- b. guide project proponents in complying with Philippine environmental laws, regulations, policies, and other issuances.
- c. secure social acceptability of projects through a process of public participation and consultation.
- d. avoid delays in Project implementation arising from the lack of environmental permits and social acceptability.
- e. avoid penalties from non-compliance to environmental laws.
- f. streamline operations and standardize reports; and
- g. streamline the review of reports and procedures.

DO 245 s. 2003 created a SEMS Committee to conduct an annual review of the SEMS Operations Manual and suggest possible amendments and/or revisions. The committee shall be headed by the Planning Service Director, with members from concerned offices, namely: Monitoring and Information Service (MIS), Environmental and Social Safeguards Division (ESSD), Project Preparation Division (PPD), and other offices to be determined by the Undersecretary for Planning. A revised version of the Manual may be released as often as necessary.

DO 268 s. 2003 then organized a Social and Environmental Management Executive Committee (SEMEC) to ensure that lessons from the field implementation of the Social and Environmental Management System Manual are duly recorded, reported and relayed to the management. SEMEC shall manage these lessons for purposes of devising more appropriate policies, guidelines, and/or procedures to improve the field implementation process and to help institutionalize the Social and Environmental Management System of the Department. The SEMEC is assisted by the Social and Environmental Management Working Group (SEMWG) and Secretariat.

The 2003 SEMS Operations Manual follows the Procedural Manual of DENR Administrative Order (DAO) 37 series of 1997 or the Implementing Rules and Regulations (IRR) of Presidential Decree (PD) 1586 known as the Philippine Environmental Impact Statement System (PEISS). The Manual then provides guidance in (i) preparing an Environmental Impact Statement (EIS) or an Initial Environmental



Examination (IEE) for the acquisition of Project Environmental Compliance Certificate (ECC); (ii) preparing DENR ENFORM-1 for the acquisition of Certificate of Non-Coverage (CNC); (iii) performing post-Environmental Compliance Certificate (ECC) issuance activities; and (iv) conducting Environmental Project Monitoring and Audit.

In 2007, the Manual was supplemented with the updated Land Acquisition, Resettlement, Rehabilitation and Indigenous Peoples (LARRIP) Policy.

In 2016, the Manual was updated under the new PD 1586 IRR or DAO 2003-30 with its Revised Procedural Manual (RPM) issued under EMB Memorandum Circular (EMC) 2007-002. Along with that update are the enhanced practices for the social dimension:

- a. more systematic and simplified checklists for social consideration on the screening of a national and local infrastructures projects.
- b. improved templates for the social analysis, and
- c. framework for other social mitigation measures which incorporates the Gender Action Plan (GAP) and the Social Development Plan (SDP).

Now, this latest 2021 Manual levels up significantly thru the following:

- a. Updating of policy framework with comprehensive listing the various recent national, international and agency policies, as well as DPWH Department Orders and manuals (Section 2).
- b. Addition of a section on safeguards operations framework as guidance in managing the many existing and annually incoming DPWH projects by type, scale and location (Section 3).
- c. Addition of a section on chronological listing safeguards activities by project phase to further streamline operations through an early entry of EIA approach for safeguard activities inclusive of work and financial planning (Section 4).
- d. Addition of a section to cover more government sectoral instruments with respective regulatory procedures, in addition to the requirements of Philippine EIS System with online transactions (Section 5).
- e. Addition of a section on guidance in the profiling of project natural and social environments (Section 6); and,
- f. Addition of sections to cover more social safeguards aside from LARIPP Policy (Section 7 to 12).



2 ENVIRONMENTAL AND SOCIAL SAFEGUARDS POLICY FRAMEWORK

The policy framework of DPWH on environmental and social safeguards is a compilation of Quality Policy, ESSD's vision and mission statement, national policies, international policies and DPWH issuances.

2.1 DPWH Quality Policy

The DPWH is mandated to undertake (a) the planning of infrastructure, such as national roads and bridges, flood control, water resources projects and other public works, and (b) the design, construction, and maintenance of national roads and bridges, and major flood control systems.¹ This SEMS Operations Manual now incorporates DPWH Quality Policy which states the commitment of DPWH to provide quality, safe, and environment-friendly public infrastructure facilities that will improve the life of every Filipino:

Quality Policy

We, at DPWH, commit to provide quality, safe, and environment-friendly public infrastructure facilities that will improve the life of every Filipino.

We commit to comply with all requirements and to continually improve effectiveness and efficiency in serving the public.

We endeavor to implement the RIGHT PROJECTS at the RIGHT COST determined through transparent and competitive bidding; with the RIGHT QUALITY, according to international standards; delivered RIGHT ON TIME through close monitoring of project implementation; and carried out by the RIGHT PEOPLE who are competent and committed to uphold the values of public service, integrity, professionalism, excellence, and teamwork.

2.2 Vision and Mission of Environmental and Social Safeguards Division (ESSD)

The integration of the various environmental and social safeguards laws in its operations follows the formulation of vision and mission for environmental and social safeguards. The Department's environmental and social vision and mission is articulated in the formerly EIAPO (now ESSD) vision and mission formulated during a strategic planning workshop held in March 2001 under the CO5 package, or the Strengthening of Environmental, Socio-Economic and Land Acquisition Capabilities project under the National Roads Improvement and Management Program (NRIMP). This vision is stated as follows:

"To serve as the environmental and social technical arm of the Department that is composed of highly competent, well trained, committed multi-disciplinary staff to promote environmentally sustainable infrastructure projects."

¹ Source: <https://www.dpwh.gov.ph/dpwh/content/about-dpwh>



Complementing this vision is the mission statement reflecting the DPWH's and ESSD's objectives and key role within the Department:

“To integrate environmental and social concerns in all stages of the DPWH infrastructure project cycle through the enhancement of the capacity of the EIAPO [ESSD] staff, increase in the level of environmental awareness within the DPWH family and the development and implementation of a sound social and environmental management system.”

The Vision of the Planning Service of the DPWH is:

Planning Service will be well respected as highly effective and efficient, with a well-qualified and professional staff, working in partnership with all stakeholders on objective plans and programs to achieve the national goals and objects and ensure quality world-class infrastructure²

2.3 Philippine Environmental and Social Safeguard Policies

2.3.1 Philippine Environmental Impact Statement System

Overview. Various environmental and social laws have been passed and still evolving to regulate development projects and undertakings against adverse impacts. The integrative law is the Philippine Environmental Impact Statement System (PEISS) which enforces the application of environmental impact assessment (EIA) which serves as an environmental planning and decision-making tool, adapting the international principles and best practices of. The comprehensive list of laws, rules and regulations of PEISS is shown in Annex 2-1, with highlights briefly presented below.

Legislative Issuances. The requirement of an environmental impact statement (EIS) for projects and undertakings was introduced in 1977 through Section 4 of PD 1151 known as the Philippine Environment Policy.

Section 4. Environmental Impact Statements. -- Pursuant to the above enunciated policies and goals, all agencies and instrumentalities of the national government, including government-owned or controlled corporations, as well as private corporations, firms and entities shall prepare, file and include in every action, project or undertaking which significantly affects the quality of the environment a detailed statement on:

- a. the environmental impact of the proposed action, project or undertaking.*
- b. any adverse environmental effect which cannot be avoided should the proposal be implemented.*
- c. alternative to the proposed action.*

² Source: PS Memo. QMS-PS 8.0. (2021) Planning Service Handbook Revision 8



- d. *a determination that the short-term uses of the resources of the environment are consistent with the maintenance and enhancement of the long-term productivity of the same; and*
- e. *whenever a proposal involves the use of depletable or non-renewable resources, a finding must be made that such use and commitment are warranted.*

The corresponding system for the EIS, called PEISS, was established in 1978 through PD 1586 or Establishing an Environmental Impact Statement System including other Environmental Management Related Measures and for other Purposes. PD 1586 requires Environmental Compliance Certificate (ECC) for environmentally critical project (ECP), or projects located in environmentally critical area (ECA).

Section 2. Environmental Impact Statement System. - There is hereby established an Environmental Impact Statement System founded and based on the environmental impact statement required, under Section 4 of Presidential Decree No. 1151, of all agencies and instrumentalities of the national government, including government-owned or controlled corporations, as well as private corporations, firms and entities for every proposed project and undertaking which significantly affect the quality of the environment.

Section 4. Presidential Proclamation of Environmentally Critical Areas and Projects. - The President of the Philippines may, on his own initiative or upon recommendation of the National Environmental Protection Council, by proclamation declare certain projects, undertakings or areas in the country as environmentally critical. No person, partnership or corporation shall undertake or operate any such declared environmentally critical project or area without first securing an Environmental Compliance Certificate issued by the President or his duly authorized representative. For the proper management of said critical project or area, the President may by his proclamation reorganized such government offices, agencies, institutions, corporations or instrumentalities including the realignment of government personnel, and their specific functions and responsibilities.

For the same purpose as above, the Ministry of Human Settlements shall: (a) prepare the proper land or water use pattern for said critical project(s) or area(s); (b) establish ambient environmental quality standards; (c) develop a program of environmental enhancement or protective measures against calamitous factors such as earthquake, floods, water erosion and others, and (d) perform such other functions as may be directed by the President from time to time.

Section 5. Environmentally Non-Critical Projects. - All other projects, undertakings and areas not declared by the Presidents as environmentally critical shall be considered as non-critical and shall not be required to submit an environmental impact statement. The National Environmental Protection Council, thru the Ministry of Human Settlements may however require non-critical projects and undertakings to provide additional environmental safeguards as it may deem necessary.



Section 9. Penalty for Violation. - Any person, corporation or partnership found violating Section 4 of this Decree, or the terms and conditions in the issuance of the Environmental Compliance Certificate, or of the standards, rules and regulations issued by the National Environmental Protection Council³ pursuant to this Decree shall be punished the suspension or cancellation of his/its certificate and/or a fine in an amount not to exceed fifty thousand pesos (50,000.00) for every violation thereof, at the discretion of the National Environmental Protection Council;

President-Level Issuances. Presidential Proclamations were issued declaring environmentally critical projects (ECPs) and environmentally critical areas (ECAs).

1. Presidential Proclamation 2146 s.1981. Proclaiming Certain Areas and Types of Projects as Environmentally Critical and within the Scope of the Environmental Impact Statement System Established Under Presidential Decree No. 1586.
2. Presidential Proclamation No. 803, s. 1996. Declaring the Construction, Development and Operation of a Golf-Course as an Environmentally Critical Project Pursuant to PD 1586. (June 6, 1996).

Presidential administrative orders were also issued to strengthen the PEISS with clarification on the implementing authorities.

1. Presidential Administrative Order No. 300 s. 1996. Further Strengthening the Philippine Environmental Impact Statement System and Clarifying the Authority to Grant or Deny the Issuance of Environmental Compliance Certificates.
2. Presidential Administrative Order 42 s. 2002. Rationalizing the implementation of the Philippine Environmental Impact Statement (EIS) System and giving authority, in addition to the Secretary of the Department of Environment and Natural Resources, to the Director and Regional Directors of the Environmental Management Bureau to grant or deny the issuance of Environmental Compliance Certificates.

DENR-Level Issuances. The development and enforcement of implementing rules and regulations and enforcement of PEISS is mandated at the agency level. The original implementing agency of PEISS was the National Environmental Protection Council (NEPC). It was dissolved and its functions were absorbed in 1987 by the EMB of DENR by virtue of EO 192 (Providing for the Reorganization of the Department of Environment, Energy and Natural Resources, Renaming it as the Department of Environment and Natural Resources, and for other Purposes). There were implementing rules and regulations issued then and were updated.

³ Executive Order 192 (1987) Section 16. The National Environmental Protection Council (NEPC), the National Pollution Control Commission (NPCC), and the Environmental Center of the Philippines (ECP), are hereby abolished and their powers and functions are hereby integrated into the Environmental Management Bureau



The DENR-level issuances presently relevant to DPWH projects are as follows:

1. DAO 2001-09. General Guidelines for the Establishment and Management of the EIA Review Support Fund.
2. DAO 2003-30. Implementing Rules and Regulations (IRR) for the Philippine Environmental Impact Statement (EIS) System.
3. DMC 2007-08. Simplifying the requirements for Environmental Compliance Certificate or Certificate of Non-Certificate applications.
4. DMC 2010-14. Standardization of Requirements and Enhancement of Public participation in the Streamlined Implementation of the PEISS.
5. DAO 2016-28. Providing New Fees and Charges for Various Services of the Environmental Management Bureau.
6. DAO 2017-15. Guidelines on Public Participation under the Philippine Environmental Impact Statement (EIS) System.
7. DAO 2019-16. Streamlining the Environmental Impact Assessment (EIA) Process and Requirements for Projects under Build, Build, Build Program

EMB-Level Issuances. The latest EMB-level issuances relevant to DPWH projects include the following:

1. EMC 2007-002. Revised Procedural Manual for DAO 2003-30.
2. EMC 2010-14. Standardization of Requirements and Enhancement of Public Participation in the Streamlined Implementation of the Philippine EIS System.
3. EMC 2013-003. Establishment of Registry System for Environmental Impact Assessment Practitioners.
4. EMC 2014-005. Revised Guidelines for Coverage Screening and Standardized Requirements under the Philippine EIS System (revising a portion of the Revised Procedure Manual).
5. EMC 2016-001. Requiring Online Submission of Compliance Monitoring Reports (CMR) under the Philippine Environmental Impact Statement System (PEISS) [for Category A projects] (Jan 18, 2016)
6. EMC 2018-004. Amending Section 1 of Memorandum Circular No. 2016-001 Requiring Online Submission of Compliance Monitoring Report under the Philippine Environmental Impact Statement System to include non-Environmentally Critical Project (non ECPs)
7. EMC 2020-18. Adoption of DENR Administrative Order No. 2019-16 for Environmental Compliance Certificate (ECC) Processing of Non-Environmentally Critical Project (Non-ECP) under the Build, Build, Build Program of the Government



8. EMC 2020-26. Implementation of Enhanced Online Processing of Certificate of Non-Coverage (CNC) Applications for Category D Projects under the Philippine Environmental Impact Statement System (PEISS).
9. EMC 2020-30. Interim Guidelines on Public Participation in the Implementation of the Philippine Environmental Impact Statement System (PD 1586) During the State of National Public Health Emergency; and
10. EMC 2021-05. Documentary Requirements for Minor Amendments (Non-Technical) of Environmental Compliance Certificate (ECC) under the Philippine Environmental Impact Statement System (PEISS).

In addition, a Memorandum of Agreement (MOA) was forged in 1999 between the DPWH and DENR to streamline the procedure for processing of applications for an Environmental Compliance Certificate for DPWH projects (Annex 2-2). While the processes for ECC application have been replaced by the later issuances, certain provisions still apply. Nonetheless, there are provisions of the MOA that needs updating to reflect the current policies of both departments. While not exhaustive., listed below are some recommendations on the revision of the MOA.

- Sections I.1, I.3 and I.4 has been superseded by EMB MC 2014-005
- Section II.8-specify/detail the periodic review of the MOA
- Section III.12 to be updated based on DENR DAO 207-15 and DAO 2018-18
- General: update to include Online Application and Submission
- General: update to include DENR DAO 2019-16 and EMB MC 2020-18 (Build Build Build Projects)

Implementing Rules and Regulations. DAO 2003-30 is the current implementing rules and regulations (IRR) of the PD 1586 with the outline presented in Annex 2-3. The main sections of DAO 2003-30 are as follows:

- Article I. Basic Policy, Operating Principles, Objectives and Definition of Terms
- Article II. ECC Application Processing and Approval Procedures
- Article III. Strengthening the Implementation of the Philippine EIS System
- Article IV. Miscellaneous Provisions

That Order defines EIA as a process that involves evaluating and predicting the likely impacts of a project (including cumulative impacts) on the environment during construction, commissioning, operation and abandonment. It also includes designing appropriate preventive, mitigating and enhancement measures addressing these consequences to protect the environment and the community's welfare. In other words, EIA is a process that serves an environmental planning tool to avoid or minimize significant adverse environmental and social impacts and risks in the entire project life cycle of development projects or undertakings. In the process, it serves to surface environmental and social issues that are governed by other laws providing corresponding measures.

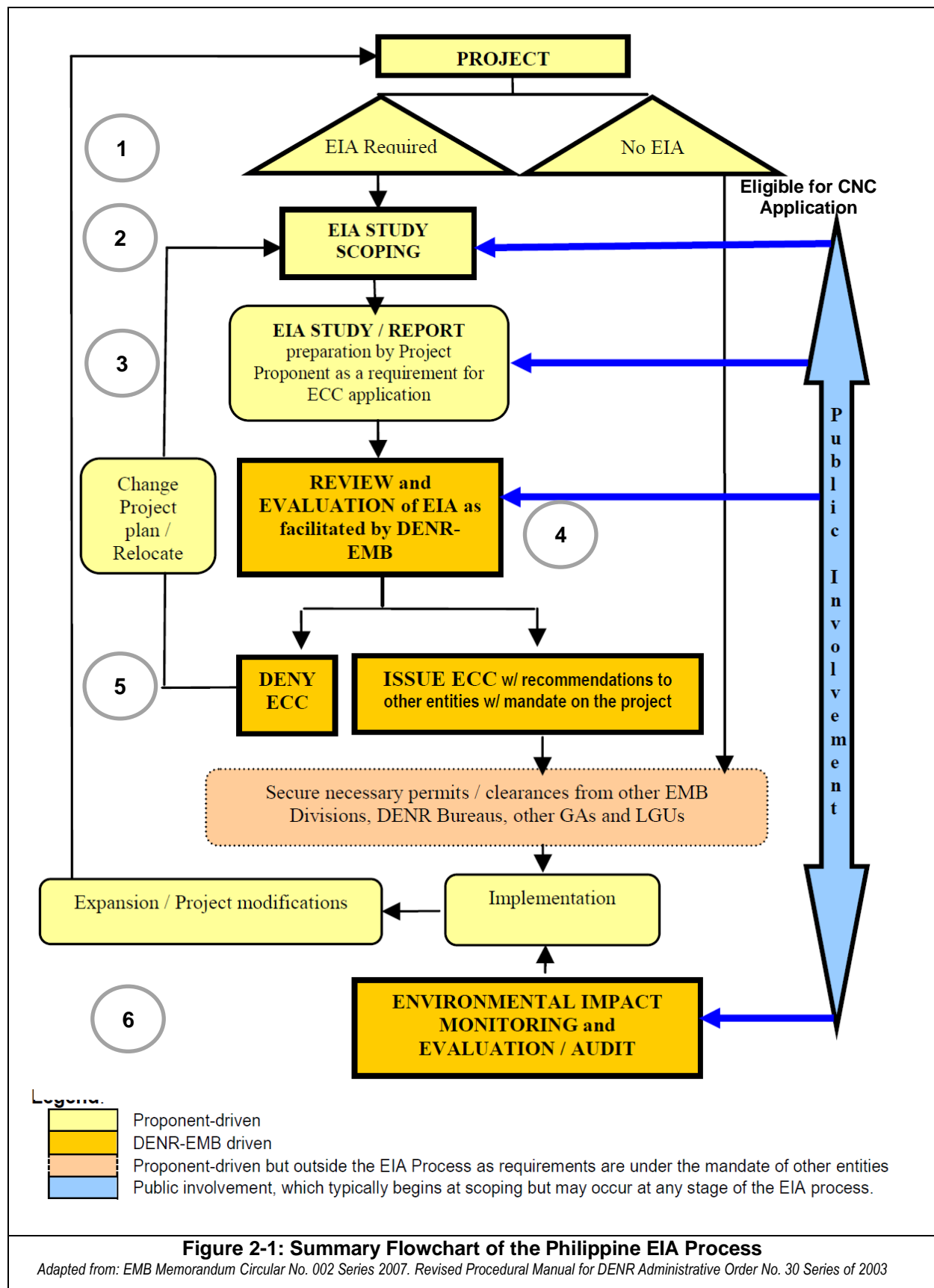
Section 1 of DAO 2003-30 outlines the key operating principles of the PEISS, as follows:



1. The EIS System is concerned primarily with assessing the direct and indirect impacts of a project on the biophysical and human environment and ensuring that these impacts are addressed by appropriate environmental protection and enhancement measures.
2. The EIS System aids proponents in incorporating environmental considerations in planning their projects as well as in determining the environment's impact on their project.
3. Project proponents are responsible for determining and disclosing all relevant information necessary for a methodical assessment of the environmental impacts of their projects.
4. The review of the EIS by EMB shall be guided by three general criteria:
 - a. that environmental considerations are integrated into the overall project planning.
 - b. that the assessment is technically sound and proposed environmental mitigation measures are effective; and
 - c. that social acceptability is based on informed public participation.
5. Effective regulatory review of the EIS depends largely on timely, full, and accurate disclosure of relevant information by project proponents and other stakeholders in the EIA process.
6. The social acceptability of a project is a result of meaningful public participation, which shall be assessed as part of the Environmental Compliance Certificate (ECC) application, based on concerns related to the project's environmental impacts.
7. The timelines prescribed by this Order, within which an Environmental Compliance Certificate must be issued or denied, apply only to processes and actions within the Environmental Management Bureau's (EMB) control and do not include actions or activities that are the responsibility of the proponent.

Regulatory EIA Cycle. Such principles and other provisions of DAO 2003-30 are operationalized by various DENR-level and EMB-level issuances which support the regulatory EIA cycle. Among of these issuances is EMC 2007-002, which provides a Revised Procedural Manual, with an outline presented in Annex 2-4. This provides the regulatory EIA cycle with six stages for projects requiring an ECC, as shown in Figure 2-1.

1. Screening of project for coverage (based on project thresholds) and requirements.
2. Scoping of the project-specific and site-specific issues and information required.
3. EIA and EIA report preparation.
4. Review and evaluation of EIA Report.
5. Decision making for the issuance or denial of an ECC; and
6. Post-ECC issuance monitoring, validation and evaluation/audit stage.





Briefly, the first step is screening the project if it required a regulatory EIA process and an ECC. Scoping that follows is proponent-driven, with the participation of the public and EMB-formed EIA Review Committee (EIARC). Scoping sets the reasonable coverage, boundary, limit or endpoints of the EIA study. Public scoping for IEEC-required projects is optional. Preparation of the EIA Report is also proponent driven, normally with the assistance of registered EIS preparers. Once submitted, the EIA Report is reviewed by for the granting or denial of an ECC. The issuance of an ECC allows implementation of the project subject to prior acquisition of other regulatory permits, and authorization. During implementation, the project is subjected to environmental monitoring and audit. Public participation forms part of the entire EIA cycle. EMB may issue, upon application, a Certificate of Non-Coverage (CNC) for project that is not required by an ECC. A few guidance notes are presented below for the EIA cycle. The full discussions are available in the EMB manuals.

Screening of Projects. Section 4.3 of DAO 2003-30, enumerates the parameters for determining projects or undertakings to be covered by the EIS System include:

1. characteristics of the project or undertaking (size of the project, cumulative nature of impacts vis-à-vis other projects, use of natural resources, generation of waste; and environment-related nuisance, environment-related hazards and risk of accidents.
2. location of the project (vulnerability of the project area to disturbances due to its ecological importance, endangered or protected status; conformity of the proposed project to existing land use, based on approved zoning or on national laws and regulations; and relative abundance, quality and regenerative capacity of natural resources in the area, including the impact absorptive capacity of the environment; and,
3. nature of the potential impact (geographic extent of the impact and size of affected population, magnitude and complexity of the impact; and likelihood, duration, frequency, and reversibility of the impact.

EMC 2014-005 manual provides discussion on the following topics under Section 4 Guidelines for Coverage Screening:

1. Determination whether a project within an ECA.
2. Determining Coverage for single component projects or undertaking
 - a. Project thresholds for coverage screening and categorization
 - b. Environmental Enhancement Projects
 - c. Gray areas in project categorization;
3. Determining categories multiple components projects.
4. Determining categories for co-located facilities (opting for programmatic ECC).
5. Determining categories for existing project for expansion/modification
 - a. Major and minor ECC amendments
 - b. Categorization of project for expansion / modification.
6. Projects operating prior to 1982.
7. Projects that have stopped operation for more than 5 years.



8. Projects that were not implemented within ECC effectivity; and
9. Determination of jurisdiction over Non-ECP projects

Project Categories. Table 2-1 shows the projects categories under DAO 2003-30, with respect to the level of potential to cause negative environmental impacts. Briefly, every Category A project is required an Environmental Compliance Certificate (ECC), supported by an Environmental Impact Statement (EIS). Likewise, every Category B project is required by an ECC but supported either by an EIS or an Initial Environmental Examination (IEE) Checklist depending on the scale of the project. In contrast, every Category C or D project is not required an ECC, but with option to apply for Certificate of Non-Coverage (CNC) with the submission of Project Description

Table 2-1: Definitions of Project Categories under DAO 2003-30

Category	Definition
Category A	Environmentally Critical Projects (ECPs) with significant potential to cause negative environmental impacts
Category B	Projects that are not categorized as ECPs, but which may cause negative environmental impacts because they are located in Environmentally Critical Areas (ECAs)
Category C	Projects intended to directly enhance environmental quality or address existing environmental problems not falling under Category A or B
Category D	Projects unlikely to cause adverse environmental impacts

Environmentally Critical Projects. ECPs are listed under Presidential Proclamation 2146 s. 1981 (Proclaiming Certain Areas and Types of Projects as Environmentally Critical and within the Scope of the Environmental Impact Statement System Established under Presidential Decree No. 1586). ECPs in that proclamation cover heavy industries, resource extractive industries, and infrastructure projects. Proclamation No. 803 added golf course project in the list of ECPs.

Environmentally Critical Areas. ECAs are also listed under Presidential Proclamation 2146, as follows:

1. Areas declared by law as national parks, watershed reserves, wildlife preserves, and sanctuaries.
2. Areas set aside as aesthetic, potential tourist spots.
3. Areas which constitute the habitat for any endangered or threatened species of indigenous Philippine wildlife (flora and fauna).
4. Areas of unique historic, archeological, geological, or scientific interests.
5. Areas which are traditionally occupied by cultural communities or tribes.
6. Areas frequently visited and or hard-hit by natural calamities (geologic, flood, typhoons, volcanic activities, earthquakes).
7. Areas with critical slope.
8. Areas classified as prime agricultural lands.
9. Recharge areas of aquifers.
10. Water bodies.



11. Mangrove Areas; and
12. Coral Reefs

Technical Definitions and Scope of ECPs and ECAs. The recent technical definitions and scope of the environmentally critical projects and areas are found in the manual issued under EMC 2014-005. Annex A of EMC 2014-005 provides the 11-page project thresholds (nature and scale) for coverage screening, categorization, and required EIA Report. Annex B shows the 4-page decision chart for determination of requirements for project modification. Annex C is the 2-page pro-form Project Description for Certificate of Non-coverage (CNC) applications. Table 2 of the manual presents the documentary requirements, and processing and deciding authority. Table 1 of EMC 2014-005 manual provides the technical definition and operationalization guide for the ECAs (Annex 2-5).

EIA Reports. Under Annex A of EMC 2014-005, three kinds of EIA Reports have been established for new single projects or undertakings: EIS, IEE Checklist, and Project Description. EIS is required for Category A projects or ECPs, as well as for Category B projects or NECP but with relatively significant and complex potential impacts by scale. The EIS is a narrative type of report containing description of the proposed project and its alternatives, characterization of the project environment, impact identification and prediction, evaluation of impact significance, impact mitigation, formulation of Environmental Management and Monitoring Plan, with corresponding cost estimates and institutional support commitment. IEE Checklist used for Category B project potentially causing relatively lesser significant potential impacts and contains mainly tabulations or short statements of information. Project Description Report is used of application of CNC for projects not required and ECC, with low or insignificant potential impacts (Category D) and for environmental enhancement (Category C).

Scoping. This activity aims to focus the EIA Report preparation only on the most essential information for specific project type. EIS is the EIA Report for projects deemed as complex (Category A or B), with the involvement of the public and EMB Review Team guided by Technical Screening (Scoping) Checklist, which is the Terms of Reference of the EIA study. The IEE Checklist provided for Category B projects already provide the scope of the EIA.

EIA Report Preparation. The preparation of EIS, which is a study, requires the deployment of different natural and social scientists. EMC 2013-003 establishes a registry system for EIA practitioners. EMC 2011-005 requires 60% of the Study Team preparing and EIS shall have attended and completed EMB-recognized training on EIA DRR/CCA Technical Guidelines using prescribed training modules. Preparation of IEE Checklist does not require a Registered Preparer.

ECC Application and Processing. EIS is filed manually together with an electronic file for a Procedural Screening with respect to the Screening Checklist by a Case Handler (CH). Compliance with the requirements then subjects the EIS for review by EMB EIA Review Committee (EIARC), public, and invited government agency. Section 6.2 of DMC 2010-14 provides 40 working days in the review of EIS-based ECC applications,⁴ after submission of complete documents, payment of application fee,

⁴ Source: EMB Citizen Charter: <https://emb.gov.ph/wp-content/uploads/2019/10/Environmental-Compliance-Certificate-for-ECPs.pdf>



and review fund. DAO 2019-16 sets 20 days processing time of Category A (ECP) projects under the Build-Build-Build Program of the government. Such 20-day timeline is adopted under EMC 2020-18 for Non-ECPs requiring an EIS.

An online facility was created for IEEC-based ECC application for Category B project under EMC 2015-008. Under EMC 2019-003, the processing time for such application is seven (7) days after submission of complete documents and payment of application fee.

An online facility was created for CNC application, for Category D and C projects, under EMC 2015-003 and enhanced under EMC 2020-26. The processing of application for CNC is one day ⁵ after submission of complete documents (Project Description) and payment of application fee.

ECC Application Fees and EIS Review Fund. DAO 2016-28 provides a tabulation of fees and charges for various services of EMB. Fee for the EIS-based application is set at PhP10,000.00; IEEC-based, P5,000.00; CNC for Category D project, 1,210.00 and CNC for Category D project, P1,000.00. Annex 2-23 of RPM of DAO 2003-30 provides guidelines for establishment of the EIA Review Fund. DAO 2001-09 provide the general guidelines for the establishment and management of the EIA Review Support Fund. This involves the preparation of EIS Review Work and Financial Plan (RWFP). creation of Review Fund Steering and Oversight Committee, participation of a third party like the Natural Resources Development Corporation (NRDC) as Fund Manager, MOA with the Project Proponent, procedures on Fund Receipt, procedures on Fund Disbursement/Release, and reporting system.

Stakeholders' Participation. DAO 2017-15 provides the participation of various in the EIA, focusing on the public. Legitimate stakeholders are identified within the impact areas, designated as direct impact area (project footprint and immediate neighbor), and indirect (distance of significant influence). The stakeholders participate in the IEC and consultation at the project announcement, scoping of the EIA, data gathering, review of the EIA Report, public hearing, and project implementation monitoring and audit.

Section 5.2 of DAO 2017-15 provides the following groups as audience in the IEC:

- a. Local government units in areas where all project facilities are proposed to be constructed/situated and where all operations are proposed to be undertaken.
- b. Government agencies with related mandate on the type of project and its impact
- c. Interest group (NGOs/POs) preferably those with mission/s specifically related to the type and impact of the proposed undertakings
- d. Households, business activities, industries that will be displaced
- e. People whose socio-economic welfare and cultural heritage are project to be affected by the project especially vulnerable sectors and indigenous populations

⁵ Source: <https://emb.gov.ph/flowchart-for-the-1-day-processing-of-cnc-applications-through-the-automated-processing-system-aps/>



- f. Local institutions (schools, churches, hospital)

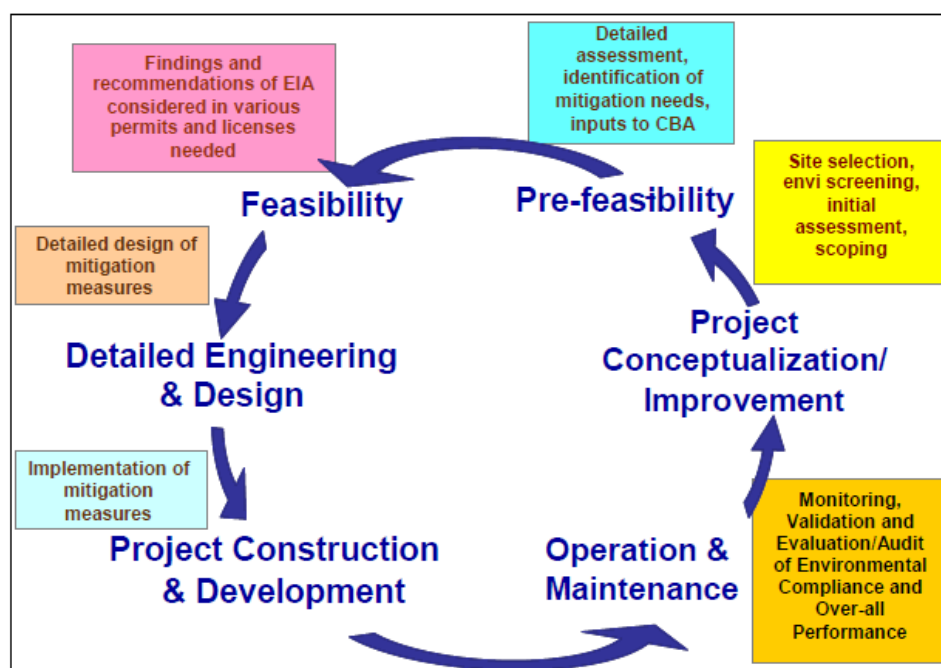
Multi-partite Monitoring Team. DAO 2017-15 requires Category A project the formation and operationalization of a Multi-partite Monitoring Team (MMT), an Environmental Monitoring Fund (EMF) and an Environmental Guarantee Fund (EGF), under a Memorandum of Agreement, depending on the nature and scale of impacts and risks. All other government approvals secured, the project is implemented together with the mitigating measures. Not included in the flowchart is the requested involvement of various agencies in the review.

ECC Amendment. In case an existing project will be modified, it will be subjected to the guidelines provided in Annex B of EMC 2014-005. The ECC for that project is amendable. There are criteria set to determine what EIA document will be submitted and procedure to follow. The document is an Environmental Performance Report and Management Plan or a Project Description. Another EIA process is undertaken, depending on the nature of expansion or modification.

EIA in the Project Cycle. The operationalization of the PEISS in the project cycle is shown in Figure 2-2. This is applicable to all projects whether the project is required an ECC or eligible for a Certificate of Non-Coverage. The diagram depicts the best practice of screening the nature and scale of environmental and social of potential impacts and risks at the identification and conception stage of a project. Screening is the start of environmental planning. The result of the exercise is usable for project development siting alternatives, plan improvements, prioritization, and approval.

Under AO 42, project proponents are directed to simultaneously conduct an environmental impact study (as required for ECC application) and the feasibility study of the proposed project. However, it is ideal that a non-regulatory EIA be conducted as an iterative process for input to the Project Feasibility Study. Problems arise later when project funding is committed in the Feasibility without the environmental cost component. When project scenarios and options have become more concrete, then that is time when the regulatory EIA is conducted.

During the Detailed Engineering Design (DED) stage, detailed environmental measures are prepared, and additional environmental baseline data are gathered. At the project implementation stage, mitigation measures and environmental monitoring plans are also implemented with reference to performance standards and commitments. The lessons learned are fed back into the project cycle for continual improvement or any project modification.



CBA=Cost-Benefit Analysis

Source: EMB MC 2007-002. Revised Procedural Manual of DAO 2003-30

Figure 2-2: EIA Process within the Project Cycle

2.3.2 Environment and Social Sector-Specific Laws, Rules and Regulations

The practice of EIA inherently takes into account compliance with other laws on the natural and social environments of an infrastructure, covered or not covered under the PEISS. Such laws take into consideration international commitments of the country and international best practices. A comprehensive list of these sectors can be gleaned under PD 1152 Philippine Environment Code (June 6, 1997), with the following outline:

- TITLE I. Air Quality Management
- TITLE II. Water Quality Management
- TITLE III. Land Use Management
- TITLE IV. Natural Resources Management and Conservation
- TITLE V. Waste Management
- TITLE VI. Miscellaneous Provisions
 - Section 52. Population-Environment Balance.
 - Section 53. Environmental Education
 - Section 54. Environmental Research.
 - Section 55. Monitoring and Dissemination of Environmental Information of Foreign Origin
 - Section 56. Incentives
 - Section 57. Financial Assistance/Grant
 - Section 58. Participation of Local Government Units and Private Individuals.



- Section 59. Preservation of Historic and Cultural Resources and Heritage
- Section 60. Government Offices Performing Environmental Protection
- Section 61. Public Hearings.

TITLE VII. Final Provisions

Annex 2-6 shows the laws, rules, and regulations for the natural environment, grouped as biodiversity conservation, pollution prevention (on land, water and air), water resources, geohazards, climate risks. Annex 2-7 is for the social environment, grouped as right-of-way/involuntary resettlement, gender and development, community health and safety, labor (health, safety, job opportunity), cultural heritage and properties conservation, indigenous peoples, and local governance. The last two items (indigenous peoples, and local governance) are geographical in character that add complexity in addressing the thematic safeguards.

2.4 International Safeguard Policies

This section provides an overview of the environmental and social safeguards of international funding agencies (The World Bank, IFC, ADB, JICA, etc.) which continually support DPWH infrastructure projects. Table 2-2 shows a comparative table of safeguard topics of WB, IFC, and ADB. The counterpart Philippine laws and lead agencies, by safeguard topic are shown in Table 2-3.

International safeguards are lengthy to be incorporated fully in this manual, but an overview is presented in Annex 2-8, citing the reference URLs, and with some notes listed below:

1. JICA adopts "Guidelines for Environmental and Social Considerations" for projects that be in line with the World Bank's Safeguard Policies, with the application of international standards, treaties, and declarations, as appropriate.
2. The agencies use different safeguard thematic titles and order but substantially similar in content and requirements.
3. Safeguards are stated by introduction, policy, objectives, scope and requirements.
4. The lead safeguard is environmental impact assessment (EIA), from which the other safeguards are triggered.
5. Projects are categorized like in the Philippine EIS System (A, B, C, or F1) to determine the level of effort to exert.
6. The agencies may require a separate specific safeguard report like SIA, IPAP, and SDP.
7. The agencies adopt the country's safeguards but may require a more stringent and additional requirement, as necessary.
8. Funding may cover several projects that would require additional safeguard documents to supplement the Philippine requirement.
9. An operations manual is usually prepared in the delivery of safeguards for funded projects.



10. Borrowers are assisted in the application of the safeguards thru hiring of consulting firms with the agency safeguards team.

Table 2-2: Comparison of Environmental and Social Safeguards Topics of WB, IFC, and ADB

World Bank (ESS) / IFC (PS)	ADB
ESS1: Assessment and Management of Environmental and Social Risks and Impacts PS1: Assessment and Management of Environmental and Social Risks and Impacts	ESPP1: Early use of screening process ESPP2: Conduct of environmental assessment ESPP2: Examination of alternatives ESPP3: Preparation of Environmental Management Plan (EMP) ESPP4: Conduct of meaningful consultation, continuing IEC and establishment of grievance redress mechanism ESPP6: Timely disclosure of draft EA and EMP ESPP7: EMP implementation and monitoring, disclosure of monitoring reports
ESS3: Resource Efficiency and Pollution Prevention and Management PS3: Resource Efficiency and Pollution Prevention	ESPP9: Pollution Prevention
ESS2: Labor and Working Conditions PS2: Labor and Working Conditions	ESPP10: Occupational safety and health and avoidance/minimization of local communities 'safety and health risks due to project activities
ESS4: Community Health and Safety PS4: Community Health, Safety, and Security	
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement. PS5: Land Acquisition and Involuntary Resettlement	Involuntary Resettlement Safeguards
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	ESPP8: Biodiversity conservation and natural resource management
ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities PS7: Indigenous Peoples	Indigenous Peoples Safeguards
ESS8: Cultural Heritage PS8: Cultural Heritage	ESPP11: Conservation of physical cultural resources and proper use of 'chance find procedures
ESS9: Financial Intermediaries	
ESS10: Stakeholder Engagement and Information Disclosure	

IFC = International Finance Corporation; ADB = Asian Development Bank
 ESS = Environmental and Social Standard; PS = Performance Standard
 ESPP = Environmental Safeguard Policy Principle (the titles used are arbitrary based on the statements)

Sources:

- WB: The World Bank. Environmental and Social Framework. October 1, 2018.
<https://www.worldbank.org/en/projects-operations/environmental-and-social-framework>
 IFC: IFC Performance Standards on Environmental and Social Sustainability. 2012
https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/performance-standards/performance-standards
 ADB: ADB Policy Paper. Safeguard Policy Statement. June 2009
<https://www.adb.org/documents/safeguard-policy-statement>



Table 2-3: Counterpart Philippine Legislations and Lead Agencies for the WB and ADB Safeguards

International Safeguards	Counterpart Philippine Legislation	Lead Agency
Environmental Assessment	PD 1151, PD 1586	DENR
Pollution Prevention and Control	PD 984, RA 6969, RA 9003, RA 8749, RA 9275, RA 7160	DENR; LGU
Biodiversity & Natural Resource Conservation	PD 705, RA 7586, RA 11038, RA 9147, PD 1067	DENR, DA, NWRB
Occupational & Community Health & Safety	PD 442 Art 162 (OSHS), PD 856	DOLE, DOH/LGU, DPWH
Physical Cultural Property (Resources) & Heritage Conservation	RA 8371; RA 10066; RA 10086	NM, NHCP, NCIP
Involuntary Resettlement	RA 10752, RA 7279, RA 9397, RA 11201, PD 757	DPWH, NHA, DHSUD
Indigenous Peoples	RA 8371, [RA 9054]	NCIP, [ARMM]
Gender Aspect	RA 7192; RA 9710, RA 8972, PD 633	NEDA, Philippine Commission on Women (PCW), DSWD

ARMM = Autonomous Region in Muslim Mindanao

2.5 DPWH Issuances on Environmental and Social Safeguards

2.5.1 Inventory of DPWH Issuances

The DPWH has integrated in its development operations various environmental and social laws, including international good practices through issuances of Department Orders. Annex 2-9 shows the consolidated comprehensive list of from January 1982 - March 2021. They are grouped into organizational set-up, project development, environmental and social safeguards, operational support, and manuals. Among the more important DPWH issuances pertains to the organizational set-up are shown in Table 2-4.

2.5.2 DPWH Manuals as Tools

DPWH has developed manuals for its efficient and consistent implementation of policies on project development, and safeguards. Some of the DPWH manuals are listed in Table 2-5.

**Table 2-4: DPWH Issuances on Safeguards Organizational Set-up**

DO No.	Subject	Date Issued
Central Office		
DPWH Memo to all Project Directors/Managers and PMOs	Organization of Specialized Environmental Impact Assessment (EIA) Group as part of the Program on Strengthening the EIA Capability of the DPWH.	1996 Jan 16
DO 220 s. 1999	Strengthening the Environmental Impact Assessment Project Office (EIAPO)	1999 Nov 09
DO 58 s. 2004	The Environmental Impact Assessment Project Office (EIAPO) is hereby renamed to the Environmental and Social Services Office (ESSO) and shall report directly to the Director of Planning Service.	2004 May 21
DO 02 s. 2014	Renaming of Environmental and Social Services Office to Environmental and Social Safeguards Division (ESSD)	2014 Jan 13
DO 268 s 2003	Creation of the Social and Environmental Management Executive Committee (SEMEC)	2003 Oct 13
DO 5 s. 2003	Creation of the Infrastructure Right-of-Way and Resettlement Project Management Office (PMO) and the Implementation of the Improved IROW Process	2003 Jan 23
DO 203 s. 2016	Creation of Unified Project Management Office Right-of-Way (UPMO-ROW) Task Force	2016 Oct 14
Regional/District Offices		
DO 224 s. 2003	Creation of Regional Environmental Impact Assessment Offices (REIAOs)	2003 Aug 18
DO 32 s. 2017	Issuance of a Standard Procedures Manual for the Regional and District Engineering Offices, with a renamed REIAO to Flood Control, Social and Environmental Section (FCSES) in the Planning and Design Division (PDD) of the Regional Office, and Environmental, Social and Right-of-Way Section of the Planning and Design Section (PDS) of the District Engineering Office (DEO)	2017 Feb 28
DO 42 s. 2012	Role of Regional and District Engineering Offices in the PMO-Implemented Projects	2012 Jun 19



Table 2-5: List of DPWH Manuals

DO No.	Subject	Date Issued
DO 18 s. 2020	Technical Manuals and Guidelines on Bridge Seismic Design.	2020 Jan 14
DO 120 s. 2019	Updating of the Road Network Definition and Inventory Update Manual and Visual Road Condition Assessment Manual Under the Road and Bridge Information Application (RBIA)	2019 Oct 24
DO 43 s. 2019	Revision of the Quality Management System (QMS) Manual in Conformance with the Requirements of ISO 9001:2015.	2019 Apr 16
DO 27 s. 2019	Manual on Streamflow 2018 Edition.	2019 Mar 11
DO 24 s. 2019	Technical Manuals and Guidelines on Road and Bridge Maintenance and Inspection.	2019 Mar 04
DO 5 s. 2018	Preventive Maintenance Manual for DPWH Most Commonly Used Equipment and Service Vehicles.	2018 Jan 12
DO 152 s. 2017	Reissuance of Department Order No. 124 s.2017 Directing the Use of the DPWH Right-of-Way Acquisition Manual by All Concerned.	2017 Dec 21
PS Memo. QMS-PS 8.0	Planning Service Handbook Revision 8.0	2021 Aug 25
DO 32 s. 2017	Issuance of a Standard Procedures Manual for the Regional and District Engineering Offices.	2017 Feb 28
DO 207 s. 2016	Adoption of the Bridge Construction Cost Estimation Manual.	2016 Oct 20
DO 093 s. 2016	Implementation of the Quality Management System (QMS) Manual.	2016 May 12
DO 068 s. 2016	Road Construction Cost Estimation Manual (RCCEM).	2016 Mar 17
DO 66 s. 2012	Amendment to Section 2.12 of the Infrastructure Right-of-Way (IROW) Procedural Manual Expropriation Proceedings and Standard Forms for Letter Offers.	2012 Sep 17
DO 41 s. 2012	Adoption of the Revised Manual on DPWH Highway Safety Design Standards, May 2012 Edition.	2012 Jun 19
DO 48 s. 2011	Guidelines for Mainstreaming Gender Equality Actions in Road Infrastructure Projects Toolkit for Making Road Infrastructure Projects Gender Responsive	2011 Aug 25
DO 15 s. 2010	Adoption of Technical Manuals and Guidebook as Reference Materials.	2010 Feb 15
DO 28 s. 2005	Manual on Construction Supervision of Flood Control Projects.	2005 Jan 31
DO 47 s. 2004	Implementation of the Bridge Management System (BMS)	2004 May 29
DO 245 s. 2003	Implementation of the Social and Environmental Management System Operations Manual [updated in 2016 and this manual]	2003 Sep 15
DO 14 s. 1999	Adoption of DPWH Standard Specifications for Public Works and Highways 1995 Edition: Volume II - Highways, Bridges and Airports in the Implementation of all Infrastructure Projects.	1999 Jan 15
DO 148 s. 1992	Records Management Manual	1992 Sep 17
DO 92 s. 1991	Reference Manual on DPWH Reports.	1991 Apr 04



2.5.3 Policies on the Implementation Environmental and Social Safeguards

Among the policies in the implementation of environmental and social safeguards are outlined in DO 245 s. 2003 (Implementation of the Social and Environmental Management System Operations Manual) and DO 057 s. 2016 (Environmental Impact Assessment (EIA) for DPWH Projects and Tree Cutting Permit Application)⁶. Such lead policies include compliance with the PEISS requirements (EIA Report preparation, acquisition of Certificate, EMP implementation, EMoP implementation), timing, responsible party (Implementing Office or Proponents), and cost of implementation charged in the annual-prepared project budget, as follows:

1. The Project Proponent is directed to comply with the provisions of DO No.5, series of 2003, Item NO.7 which states that "the ECC shall be secured before the detailed design for all projects". (DO 057 s. 2016).
2. All Project Proponents (UPMOs, Bureaus, Services, Regional and District Engineering Offices) shall conduct environmental assessment, prepare the necessary environmental document and secure the corresponding environmental clearance whether ECC or CNC prior to project implementation. (DO 057 s. 2016).
3. Project that will fall under Category A or B requires the application of an ECC. First level scoping shall be conducted together with the DENR-EMB and some members of the EIA Review Committee to determine the scope of work to be undertaken in the Environmental Impact Statement (EIS). (DO 057 s. 2016).
4. All Environmental Impact Statements (EISs) for projects of the DPWH must be reviewed and recommended for approval by the ESSD. Initial Environmental Examination (IEE) Reports and IEE checklists, and applications for Certificates of Non-Coverage (CNCs) must be reviewed and recommended for approval by the REIAO [now FCSES] of the region concerned. (DO 245 s. 2003).
5. All EISs, IEEs, IEE checklists and [applications for] CNCs must be approved by the implementing office concerned wherein the documents were prepared, before they are released. (DO 245 s. 2003).
6. For projects that falls under Environmental Enhancement Projects (intended to directly enhance the quality of the environment or directly address existing environmental problems) is classified under Category C. Proponent shall secure CNC and shall prepare Project Description Report. (DO 057 s. 2016).

⁶ The Tree Cutting Permit Application under DO 057 s. 2016 was amended by DO 116 s. 2018.



7. Compliance to the conditions of the Environmental Compliance Certificates (ECCs), and implementation of the mitigating measures as contained in the Environmental Management Plans (EMPs), including the implementation of the Environmental Monitoring Plan (EMoPs) shall be the responsibility of the Implementing Office, to be monitored by ESSD. (DO 245 s. 2003).
8. To ensure compliance to these above-mentioned conditions and mitigating measures, the tender documents for infrastructure projects subject for bidding will be included in the contractor's contract which will include special provisions for such environmental measures under "Environmental Clauses." (DO 245 s. 2003).
9. Cost incurred and tasks perform for the preparation of these [EIA] documents shall be charged against fund of the respective project. (DO 057 s. 2016).
10. The cost of implementing these conditions and mitigating measures in the ECCs and EMPs/EMoPs shall be included in the project budget of the Implementing Office concerned. (DO 245 s. 2003).
11. The Implementing Office concerned shall ensure that the costs of implementing the environmental compliance and monitoring activities, as indicated in the SEMS Operations Manual, are included in the project budget. (DO 245 s. 2003).
12. The Implementing Office shall prepare an annual budget incorporating the costs of implementing the activities in the SEMS Operations Manual such as the monitoring and the conduct of environmental studies. (DO 245 s. 2003).
13. The required SEMS-related activities shall be determined during the preparation of the feasibility study for a project. (DO 245 s. 2003). [This needs a revision so that the determination is at the Project Identification Stage]



3 OPERATIONAL FRAMEWORK

3.1 Environmental and Social Safeguards Defined

Safeguards are measures or activities to avoid, abate (minimize), repair the damage of, or offset project impacts, according to reference standards and outcome. Such measures are institutionalized and enforced through laws, rules, regulations, and funding conditions. Safeguards come in different forms like certificates, permits, authorization, contracts, implementation of measures, reporting, supporting documents, plans, standard of performance, standard activities or events (like scoping, consultation, key informant interviews, focused group discussion, inspection, verification).

3.2 Generic Safeguard Cycle as Generic Operational Framework

Environmental and social safeguards operations refer to the collection of practices to identify and timely deliver the requirements, whether regulatory, contractual, or internal. Safeguards operational framework refers to the collection various elements of operation, and their scope, boundaries and their functional relationships. **Table 3-1** shows a multidimensional illustration of the elements grouped as frontline activities, and management aspects (inputs, protocols, and targeted operations characteristics), which are found in the various DPWH issuances. Frontline activities cover the regulatory processes, largely within the control of regulatory agencies. The management aspects are those within the control of DPWH.

Each identified safeguard has a cycle consisting of identification, planning, preparation, implementation, monitoring, evaluation, and completion. Every stage of the cycle has an Action Planning routine consisting of the rationale (or trigger or cause of action), objective (outcome), output (deliverable), process to deliver the output, and inputs to support the process, say, ROOPI. The Delivery Phase reverses the list with modification: provision of inputs, undertaking the process, generation of output, describing the outcome and evaluation the outcome.

For example, Action Planning Stage for Project Screening consists of drafting the following:

- a. statement of rationale of the project screening.
- b. list of regulatory requirements identified as the objective.
- c. the Screening Report as the output.
- d. the specific activities of the environmental and project staff as the process; and
- e. the lead personnel, support personnel, budget, logistics, project information, tools, and others as inputs.

The Delivery Stage reverses the list about starting with the deployment of the lead staff who will then gather the inputs, lead in the discussion table with other staff (process) to come up with the Screening Report (output), which subsequently informs the other units of the requirements (outcome) with subsequent assessment on the use of the report in Work and Financial Planning (evaluation).



Table 3-1: Safeguards Operations Framework

A. Frontline Operations		
Safeguard Cycle	Action Planning of Cycle Stage	Delivery of Cycle Stage
<ol style="list-style-type: none"> 1. Safeguard Identification 2. Action Planning 3. Preparations of Inputs to implement the plan 4. Delivery / Implementation of the plan (process) 5. Monitoring the progress of implementing the plan (for the output or completion) 6. Description Output Outcome 7. Evaluation of Outcome 	<ol style="list-style-type: none"> 1. Rationale (cause of action) 2. Objective (intended condition) 3. Output (to delivered) 4. Process (to undertake) 5. Inputs (to prepare) <p>[Lead activity is organizing with inception meeting]</p>	<ol style="list-style-type: none"> 5. Evaluation (of outcome) 4. Outcome (effect of output) 3. Output (completion) 2. Process (undertaken) 1. Inputs (prepared)
B. Management Aspects		
Inputs	Protocols	Targeted Operations Characteristics
<ol style="list-style-type: none"> 1. Lead Personnel 2. Support Personnel 3. Budget 4. Logistics 5. Knowledge 6. Tools (forms, templates) 7. Guidance 8. Assistance 9. Policy Support 10. Capacity Building 	<ol style="list-style-type: none"> 1. Safety and Health 2. Roles and Responsibilities 3. Levels of Authority 4. Approvals 5. Communication 6. Coordination 7. Field Work 8. Quality Assurance 9. Reporting 10. Documentation 11. Document Tracking 12. Record Keeping 13. Data Base 14. Stakeholder Engagement 15. Contracting of Services 16. Resolution of Issues 17. Request for Assistance 18. Request for Variance 	<ol style="list-style-type: none"> 1. High Level of Preparedness 2. Early organizing 3. Well Organized 4. Skilled Leadership 5. Teamwork 6. Timely Close Coordination 7. Timely Sharing of Information 8. Capacitated work force 9. "Early Bird" 10. On schedule 11. Sufficient Inputs Provided 12. Protocols Observed 13. Issues Fast Resolved 14. Flexible For Feedbacks 15. Gender Responsive

Below is a discussion on the lead elements in the operational framework: EIA, information on DPWH projects, safeguards activities per project phase, roles and responsibilities of the frontline groups, and budget.

3.3 EIA as Lead Institutionalized Safeguard Activity

It the policy of DPWH to subject every infrastructure project to EIA, regardless of nature and size, and in accordance with PEISS. EIA is the lead institutionalized safeguard activity, locally and internationally to achieve an environmentally sound project. The PEISS provides guidance in the conducting an EIA, which involves documenting the infrastructure physical attributes, location, activities, environmental aspects, potential impacts and risks, environmental management plan, and monitoring plan in the project phases, covering the requirements of the various environment and social sectors. The following are the primary regulations in the Philippine EIA procedure:



- a. EMC 2014-005 or the Revised Guidelines for Coverage Screening and Standardized Requirements under the Philippine EIS System.
- b. EMC 2007-002 or DAO 2003-Revised Procedural Manual; and
- c. DAO 2017-15. Guidelines on Public Participation under the Philippine Environmental Impact Statement (EIS) System

Project Screening is the lead EIA activity with reference to EMC 2014-005. Screening provides preliminary extent of potential safeguards activities according to the nature, scale, status and location of the proposed project. Screening determines whether the project is covered (Category A, or B) or not covered (Category C or D) under the PEISS. The other issuances are then referred to for succeeding safeguards activities.

3.4 DPWH Infrastructure Projects

EIA requires information about a proposed project to initially identify sources of potential adverse impacts. DPWH projects are national roads and bridges, flood control systems, water resource development projects and other public works. Projects include environmental enhancement projects such as the flood control and slope protection projects DPWH undertakes planning, design, construction and maintenance of these projects, in accordance with national objectives, pursuant to EO 124, issued on 30 January 1987. DPWH continually develops its technology to ensure the safety of all infrastructure facilities, securing for all public works and highways, the highest efficiency and quality in construction. The actual construction works are sources of environmental and social impacts, and so as their supporting components such as heavy equipment refueling station, workshop areas, water supply, electric supply, quarry area, and batching plant.

DO 179 s. 2015 provides the 2015 manual for design guidelines, criteria and standards consisting of eight volumes covering the minimum requirements, specification and procedures for the design of highways, bridges, building and flood control projects, as follows:

- Volume 1 : Introduction and Overview
- Volume 2 : Geohazard Assessment
- Volume 3 : Engineering Surveys
- Volume 4 : Geological and Geotechnical Investigation
- Volume 5 : Bridge Design
- Volume 6 : Public Buildings and Other Related Structures

DPWH DO 133 s.2018 provides the classification of roads such as national road, local road and other roads, as follows:

1. National Roads:
 - 1.1 Primary Roads - A contiguous length of significant road sections extending linearly without any breaks or forks that connect major cities (At least around 100,000



population) comprising the main trunk line or the backbone of the National Road System.

1.2 Secondary Roads

1.2.1 Directly connect cities to national primary roads, except in metropolitan areas

1.2.2 Directly connect major ports and major ferry terminals to national primary roads

1.2.3 Directly connect major airports to national primary roads

1.2.4 Directly connect tourist service centers to national primary roads

1.2.5 Directly connect cities (not included in the category of major cities)

1.2.6 Directly connect provincial capitals within the same region

1.2.7 Directly connect major national government infrastructure to national primary roads or other national secondary roads

1.3. Applicable only for Primary and Secondary Roads

1.3.1 Bypass/Diversion Roads - Roads that divert through traffic away from the City/Municipality Business Center (with affirmative Feasibility Study).

1.3.2 Roads that would connect or fill the gap between adjoining national roads (protruding) to form a continuous national road network.

1.4 Tertiary Roads

1.4.1 Other existing roads under the DPWH which perform local function.

2. Local Roads

2.1 Provincial Roads

2.1.1 Connect cities and municipalities without traversing National Roads.

2.1.2 Connect National Roads to barangays through rural areas.

2.1.3 Connect to major provincial government infrastructure.

2.2 Municipal and City Roads

2.2.1 Roads within the poblacion.

2.2.2 Roads that connect to provincial and national roads.

2.2.3 Roads that provide inter-barangay connections to major municipal and city infrastructure without traversing provincial roads.

2.3 Barangay Roads

2.3.1 Other public roads (officially turned over) within the barangay and not covered in the above definitions.

3. Other Roads

3.1 Expressways



3.1.1 Highways with limited access, normally with interchanges; may include facilities for levying tolls for passage in an open or closed system.

Infrastructure construction projects are also classified by such status as new development, rehabilitation, reconstruction, improvement, and maintenance. Development refers to the construction of a new productive unit. Rehabilitation refers to the restoration of an existing unit to essentially the same condition as when it was first constructed. Reconstruction refers to the construction involving major modifications to the existing unit in terms of design, magnitude and efficiency. Improvement refers to the restoration of an existing unit to a condition better than that of the present.

Moreover, infrastructure construction projects are classified by source of funding: either locally funded or foreign assisted, with total project cost ranging from millions to billions of pesos.

Each infrastructure project has a cycle with the following phases: project identification, project preparation, project implementation, and project operation and evaluation, which are briefly described in **Table 3-2**.

Table 3-2: Infrastructure Project Cycle

Project Phase	Description
1. Project Identification	The process of collecting and identifying potential projects with expected return of investments, including the preparation of a master plan
2. Project Preparation	
a. Project Feasibility Study	The feasibility study consists of various investigations and tests necessary to determine whether the project can and should be carried out and if, so, how and when?
b. Inclusion in the Public Investment Program ⁷	If the project meets the above feasibility criteria, it is considered for inclusion in the Public Investment Program for the period of six years.
c. Fund Appropriation	Based on the medium-term infrastructure program, appropriations for the projects are authorized through legislation.
d. Detailed Engineering	Detailed engineering of a project under the medium-term program is undertaken in preparation for actual implementation under the annual infrastructure programs.
e. Right-of-Way Acquisition	The right-of-way of any infrastructure project shall be acquired ahead of construction in order not to impede the work.
f. Inclusion of Project in Annual Program	Projects proposed for inclusion in the annual infrastructure program are a) those that rank high in priority within the medium-term program, and b) those that are technically

⁷ Public Investment Program (PIP) refers to the six (6) years program which contains the rolling list of on-going and proposed projects, activities and programs (PAPs) implemented by DPWH in support to the policy and strategies of the PDP. The Philippine Development Plan (PDP) refers to the plan which serves as a guide to the Department in formulating policies and implementing development program for the medium-term plan that is aligned to the goals and objectives of the present administration.



Project Phase	Description
	ready for actual implementation during the year (i.e., with substantially completed detailed engineering).
3. Project Implementation	
a. Fund Releases	Immediately after the National Economic Development Authority (NEDA) Board approves the annual infrastructure program in early November, the DBM issues the Advice's of Allotment (AAs) for the projects in the program on a comprehensive basis.
b. Bidding and Contracting	In line with the policy of the government to rely on the private sector as the main engine of economic development, infrastructure projects are generally undertaken by contract after public bidding.
c. Construction	Actual construction work is carried out through the Unified Project Management Office (UPMO) and the Regional/District Offices.
d. Completion and Acceptance	Project completion is the transition from the development to the Operation stage. Completion reports and as-built plans are prepared by contractor for the submission to the implementing office heads, to management, and to funding institutions.
e. Payment	Due and demandable claims are processed by the DPWH either at the Central, Regional or District level, in accordance with existing government budgeting, accounting and auditing rules
4. Project Operation and Evaluation	
a. Operation and Maintenance	National roads and bridges, major flood control structures, and related facilities of national importance remain under the responsibility of the DPWH during the Operation phase. The Regional and District Offices undertake the maintenance of the facilities generally by administration.
b. Impact Evaluation	Impact evaluation or post-project appraisal is an attempt to assess the results of a project and, as a function of the results, of the means employed to achieve them

Reference: <https://www.dpwh.gov.ph/dpwh/business/index>

Note: For projects costing over PhP 500 million, the ECC shall be secured before approval of the project by the National Economic and Development Authority (NEDA)/Investment Coordination Committee (ICC). DO 152 s. 2017. p, 2.1-2

3.5 DPWH Safeguards Activities by Project Phase

SEMS involves timing the matching environmental and social safeguards activities for each project phase. The Project Definition Phase generates a Master Plan which is matched for EIA-based environmental and social safeguards plan. The Project Preparation Phase covers FS, fund appropriation, detailed engineering, and inclusion of project in the annual program. Such preparations for project implementation logically involve obtaining various government clearances, permits, authorization as well as detailing site-specific safeguards implementation plan with costing. The Project Implementation Phase begins when funds are released for the obtaining the necessary ROW and



carrying out construction works. This is also the time to implement the necessary impact mitigating measures, monitoring plans, and performance reporting requirements. Project Operation and Evaluation phase includes the assessment of the overall performance on the implementation of the environmental and social safeguards. Spill-over measures continue after construction.

Table 3-3 is a list of generic activities and output documents to attend to per project phase, regardless of the scale of the proposed locally or foreign funded project. They serve a basis for Annual Program of Work and Budget. The table also serves as a guide or "highway" for various DPWH units in developing internal safeguards operational protocols. As part of a learning experience, the generated output documents for can be used as templates or pattern in subsequent projects The guidance for each activity is presented in **Section 4**.

Table 3-3: Generic Safeguards Activities and Output Documents by Project Phase

Project Phase / Activity		Output Document
1.0 Project Identification Phase		
1.	Early Announcement by Implementing Office to Safeguards Group the identified Proposed Project	Internal Memorandum for the Project Announcement
2.	Early Organizing the Safeguards Team and Protocols	Internal Memorandum for the Project Development and Safeguards Team
3.	Screening of Projects Environmental and Social Requirements	Filled out Project Screening Form
4.	Budget Planning for the Safeguards Activities at the Project Preparation Phase	List of safeguard activities with costing for the Project Preparation Phase
5.	Initial interagency Project announcement through courtesy calls, IEC and Consultation (regulatory, LGUs)	Report on courtesy call, IEC and Consultation with government agencies
6.	Initial Public Project Announcement through courtesy call, IEC and Consultation (affected residents, civil societies, NGOs)	Report on courtesy call, IEC and Consultation with government agencies
7.	Provision of Inputs to Project Alternatives for Feasibility Study	Recommendation for Project Alternatives
8.	Application for NCIP Certification Precondition if the project is located in an IP area [See DO 43 s2020 for ROW]	NCIP Certification Precondition with Memorandum of Agreement (MOA) or Memorandum of Cooperation (MOC)
9.	Preparation of EIA Report (EIS for Category A or B ECP Project; IEE for Category B Project in ECA, and PD for Category C or D not-covered Project)	PD, IEE, or EIS
10.	Application for PAMB Clearance required for ECC application if the project is located in NIPAS Area	PAMB Clearance
11.	Manual submission of EIS for ECC application, Online submission of IEE for ECC application Online submission of PD for CNC application,	EIS or CNC
2.0 Project Preparation Phase		
1.	Stakeholder Preparation	Stakeholder Preparation Reports
2.	Baseline Natural and Social Environments Data Collection	Natural and Social Environments Data
3.	Detailing of Site-specific Impacts and Risks, and Measures	Environmental Management Plan
4.	Detailing of Site-specific Monitoring Activities	Environmental Monitoring Plan
5.	Acquisition of Government Clearances, Permits and Authorization	Regulatory Clearances, Permits, and Authorization and Compliance Plans to Conditions



Project Phase / Activity	Output Document
6. Preparations for Safeguards Implementation	Safeguards Implementation Plan (Inventory of Safeguards and Proposed Budget)
3.0 Project Implementation Phase	
1. Implementation of Environmental and Social Management Plans	Implementation of Environmental and Social Safeguards Status Reports on the Implementation of Environmental and Social Management Plans
2. Project Inspection during Preconstruction	Inspection Checklist for Pre-Construction
3. Project Inspection during Construction	Inspection Checklist for Construction Phase
4. Project Inspection After Construction (Turnover)	Inspection Checklist for Post-Construction Phase
5. Environmental Quality Measurements During Emergency Response	Report on the Results of Measurements
6. Preparation of Work Program and Budget Proposal for the Following Year	Proposed Work Program and Budget for the following year
4.0 Project Operation and Evaluation	
Monitoring of the status of the infrastructure project (e.g., observed functionality, integrity, public safety, impacts and potential risks)	Report on the Status of the Infrastructure Project

Table 3-4 presents the project phases vis-à-vis the EIA process.

Table 3-4: Project Phases vis-à-vis the EIA Process

Project Phases	EIA Process
Project Concept	Site Selection, Environmental Screening, Scoping
Pre- Feasibility Study / Feasibility Study	Baseline Characterization, Detailed Assessment, Identification of Mitigation needs Findings and recommendation of the EIA considered in the various permits and clearances
Detailed Engineering Design	Detailed design of mitigating measures
Construction Phase	Implementation of mitigating measures
Operation and Maintenance	Monitoring, evaluation and audit of environmental compliance and over-all compliance
Abandonment Phase	Preparation of abandonment plan

Source: EMB MC 2007-002. Revised Procedural Manual of DAO 2003-30

3.6 Overall Safeguards Roles and Responsibilities in the Project Phases

3.6.1 DPWH Organization

Corresponding to the project phases and safeguards activities are the attending DPWH units and their frontline, technical and support functions. The functions are established through the organic organizational set-up, or through creation of specialized groups consisting of different units. Annex 3-1 contains DPWH organization and overview of functions. DPWH organization consists geographically



of the Central Office, 16 Regional Offices, and 185 District Offices.⁸ DPWH Central Office has nine Services, six Bureaus, four Unified Project Management Offices (UPMOs).⁹ A Regional Office has nine divisions, while a District Office has six sections.¹⁰

The three levels offices have similar functional groups: Service Level at the Central Office, Division Level at the Regional Office, and Section Level at the District Office. Among the common functions are planning, design, construction, safeguards, quality assurance, monitoring, human resource, records, information, legal and finance, involving other DPWH units.

In other words, the Legal Service (LS) has counterpart Legal Staff in the ROs and DEOs; Planning Service (PS), including the Environmental and Social Safeguards Division (ESSD), has its counterpart Planning and Design Divisions/Sections in the ROs/ DEOs; Financial Service has its counterpart Financial Division/Sections in the ROs and DEOs; and Bureau of Design (BOD) has its counterpart Planning and Design Divisions/Sections in the ROs/DEOs.

3.6.2 Project Proponent / Implementing Office

Project Proponents or Implementing Offices are UPMOs, Bureaus, Services, Public-Private Partnership (PPP) Service, Regional Offices and District Engineering Offices. The UPMOs include four clusters at the Central Office, namely: Flood Control Management Cluster, Bridges Management Cluster, Roads Management Cluster 1 (Bilateral), Roads Management Cluster 2 (Multilateral).

The Implementing Office leads in observing environmental and social safeguards in the various stages of a project, in coordination with and support by other DPWH units. At the Project Definition Phase, they are primarily responsible in proposing projects, in accordance with the following division-level functions of the Planning Service:

- a. Development Planning Division.
 - 1) Formulate long and medium-term infrastructure development plans and programs of the Department; identifying the preferable future highway network scenarios through optimized strategies determined under alternative budget constraints integrating asset preservation and network development projects.
 - 2) Prepare an annual road slope disaster and management plan/projects for all national road using Road Slope Management (RSM).
- b. Programming Division
 - 1) Conduct coordination meetings with the implementing offices and review/analyze pre-construction activities, physical and financial status including project timelines/highlights as basis in determining projects to be included in the AIP including the amount to be appropriated /allocated for the project.

⁸ Source: <https://www.dpwh.gov.ph/dpwh/2020%20DPWH%20ATLAS/List%20of%20DEOs.htm>

⁹ Source: <https://www.dpwh.gov.ph/dpwh/about/org-chart/org-chart-main>

¹⁰ Source: DO 32 s. 2017. Issuance of a Standard Procedures Manual for the Regional and District Engineering Offices



- 2) Generate the Department's AIP (Nationwide) based on the final list of Foreign Assisted Projects (FAPs) and Locally Funded Projects (LFPs) to be submitted to DBM through Online Submission of Budget Proposal (OSBP) for review and approval. For eventual inclusion in the National Expenditure Program (NEP).
- c. Project Preparation Division
 - 1) Conduct master plan, pre-feasibility and feasibility studies inclusive of technical, economic and traffic aspects of infrastructure projects such as roads, bridges, flyovers, interchanges, bypasses projects utilizing sound preliminary engineering and economic evaluation procedures and practices to determine their technical and economic viability in support of plans and programs of the DPWH.
 - 2) Gather social, economic, technical, traffic, hydraulic and hydrological and related data to support project preparation activities, feasibility and project studies, as required.

DO 057 s. 2016, and DO 245 s. 2003 provide the following list of functions of Project Proponents / Implementing Offices:

- a. All Project Proponents (UPMOs, Bureaus, Services, Regional and District Engineering Offices) shall conduct environmental assessment, prepare the necessary environmental document and secure the corresponding environmental clearance whether ECC or CNC prior to project implementation. (DO 057 s. 2016).
- b. All EISs, IEEs, IEE checklists and CNCs must be approved by the implementing office concerned to whom these documents were prepared before they are released (DO 245 s.2003)
- c. The Project Proponent is directed to comply with the provisions of DO No.5, series of 2003, Item NO.7 which states that "the ECC shall be secured before the detailed design for all projects". (DO 057 s. 2016).
- d. Compliance to the conditions of the Environmental Compliance Certificates (ECCs), and implementation of the mitigating measures as contained in the Environmental Management Plans (EMPs), including the implementation of the Environmental Monitoring Plan (EMoPs) shall be the responsibility of the Implementing Office, to be monitored by EIAPO. (DO 245 s. 2003).
- e. The cost of implementing these conditions and mitigating measures in the ECCs and EMPs/EMoPs shall be included in the project budget of the Implementing Office concerned. (DO 245 s. 2003)
- f. The Implementing Office shall prepare an annual budget incorporating the costs of implementing the activities in the SEMS Operations Manual such as the monitoring and the conduct of environmental studies. (DO 245 s. 2003).
- g. The Implementing Office concerned shall ensure that the costs of implementing the environmental compliance and monitoring activities, as indicated in the SEMS Operations Manual, are included in the project budget. (DO 245 s. 2003).



To ensure compliance with the ECC conditions and mitigating measures, the tender documents for infrastructure projects subject for bidding includes in the contractor's contract "Environmental Clauses." (DO 245 s. 2003). Contracting DPWH provides orientation to contractors in the delivery of services. In this case it is just proper and the responsibility of the contracting parties to orient any consultant, not only in the timely and quality delivery of specific goods and services but also in all the documentary requirements including accounting documents mindful of the DPWH document tracking system (DOTs). This will ensure project activities and payments are in schedule.

The Implementing Office organizes the project-specific Project Development Team and the counterpart Project Safeguards Team. The Implementing Office informs early the Project Safeguards Team of the proposed project being conceived, and any modification thereafter.

3.6.3 Project Development Team

Project Development Team is organized to attend to the requirements of the project development cycle. They are the sources of information on Project Description in the EIA, planning, preparation, construction, implementation of engineering measures, and performance monitoring. They closely coordinate with the Project Safeguard Team.

3.6.4 Safeguards Group / Project Safeguards Team

Safeguard Group is introduced here as a collective functional term under approved plantilla units with frontline functions on environmental and social matters. These units include ESSD at the Central Office, FCSES at the Regional Office, ESROW/EEP at the District Office, attending to safeguards matters in general. Safeguard-specific units include the Legal Service, Stakeholder Relations Service, Stakeholder Affairs Division, Public Information Division. Special committees are also formed thru a Department Order. Safeguard Team refers to the organized personnel coming from the Safeguards Group and other units under a special assignment, attending to the various environmental and safeguards requirements for a specific project.

The Project Safeguards Team is responsible in screening proposed projects for regulatory requirements and the associated Environmental Program of Work and Budget. Project Safeguards Team is tasked to keep a good documentation of the activities and keeping records towards digital storage and faster access. A regular status report of the Safeguard Team to the Implementing Office on the progress of project safeguard activities is best practiced. The Safeguard Team shall keep a tabulated Chronology of Events with Remarks to efficiently visualize and a form transparency on the progress in attending to the safeguards requirements. It is the responsibility of the Safeguards Team to identify, customize, and add the different safeguards presented in this manual, towards proposal to update or add DPWH policies.

3.6.5 Environmental and Social Safeguards Division

An EIA Group was created in 1996 at the DPWH Central Office under the Office of the Undersecretary for Technical Services; then renamed and strengthened to EIA Project Office (EIAPO) in 1999; then renamed to Environmental and Social Services Office (ESSO) reporting directly to the Director of



Planning Service in 2004; and then upgraded to Environmental and Social Safeguards Division (ESSD) still under the Planning Service in 2014 as a result of the approval of the Rationalization Plan. ESSD has Environmental Safeguard Section, Social Safeguard and GAD Section, and National Sewerage and Septage Management Program Section.

ESSD, Planning Service is responsible to ensure the compliance of the Implementing Offices with the environmental and social safeguards, with the following present functions, defined in Section 2.1 of the Planning Service Handbook revision No. 8.0 issued last January 31, 2021.

1. Review/evaluate Environmental, Social and Gender and Development Aspects in Master Plan, Feasibilities Study and other Environmental and Social Reports such as Environmental Impact Statement (EIS), Initial Environmental and Examination Checklist (IEE Checklist), Project Description (PD), Right-of-way Action Plans (RAP), Gender and Development (GAD) Reports and Indigenous People Development Plan (IPDP) as requested/prepared by the Implementing Office.
2. Prepare Environmental and Social Reports such as Initial Environmental and Examination Checklist (IEE Checklist), Project Description (PD), Right-of-way Action Plans (RAP), Gender and Development (GAD) Report as requested by the Implementing Office.
3. Prepare Terms of Reference (TOR) and Estimated Budget Cost for Environmental, Social and Gender and Development Aspect for the proposed priority projects that will be subjected to Master Plan and Feasibility Studies (MP/FS) either local or foreign funded as requested by the Implementing Office.
4. Review/ evaluate submitted National Sewerage and Septage Management proposals, particularly the technical, environmental and financial/economic viability of the project for possible funding/subsidy.
5. Identify, prepare and formulate project proposals and concept papers for National Sewerage and Septage Management Projects.
6. Prepare Terms of Reference (TOR) and Estimated Budget Cost for Sewerage and Septage for the proposed priority projects that will be subjected to Feasibility Studies (FS).
7. Conduct Feasibility Studies for Sewerage and Septage Projects and monitor implementation of funded NSSMP Proposals.
8. Assist Project Proponent in the conduct of the Stakeholders Involvement such as Public Scoping, Consultations and Hearings
9. Assist the Project Proponent in the Environmental Impact Assessment until the issuance of Environmental Clearances.
10. Assist the Project Proponent in the Preparation of Right-of-Way Action Plan (RAP) and Gender and Development (GAD) Report.
11. Conduct/Assist monitoring activities as requested by the Project Proponent on:



- Environmental Compliance of Environmental Management Plan and ECC Environmental Compliance Certificate (ECC) conditions of the project.
 - Internal Monitoring for Social aspects as DPWH Internal Monitoring Agent (IMA).
12. Manage/ Oversee/Attribute the DPWH Climate Change Adaptation and Mitigation (CCAM) Programs/Activities/Projects.
 13. Prepare Yearly Budget for the Conduct of Environmental Impact Assessment, Right-of-way Action Plan, Environmental Activities, Gender and Development Activities, Rainwater Collection System and National Sewerage and Septage Management Subsidy of DPWH.
 14. Develop Gender and Development (GAD) Plans and Programs and oversee its implementation and integration in the entire project cycle.
 15. Oversee the implementation of Solid Waste Management of the Department.
 16. Consolidation of Solid Waste Management and DPWH Climate Change Adaptation Reports specifically on Rainwater Collection System (RWCS), Bio-engineering Reports, Cleaning/Clearing of Esteros and Waterways, Sustainable Development of Manila Bay, Community Based and Employment Program and National Greening Program
 17. Continuous training and capacity building for the DPWH Regional, DEO's, Bureaus, Services and Unified PMO's, LGU and Water District on the topics related to Environmental Impact Assessment (EIA), Right-of-way Action Plan, Gender and Development, NSSMP, Solid Waste Management.
 18. Attend Meetings related to Environmental, Social, GAD and NSSMP Forum/ Seminars/ Hearings/ Trainings.
 19. Review/ Prepare Comments on various documents related to Environmental, Social Aspects and Septage and Sewerage of various House Bills, Senate House Bills, Memorandum of Agreements etc.
 20. Formulate policies, and guidelines with regards to Environmental, Social Safeguards, Gender and Development and National Sewerage and Septage Management Programs.

3.6.6 Focal Safeguards Persons from UPMOs, Bureaus and Services

The implementing Office at the Central Office (like UPMOs, Bureaus, and Services) assigns Focal Persons to handle environmental and social safeguards for their respective projects in coordination with ESSD, other offices in the Central Office, Regional Offices, and District Engineering Offices.

3.6.7 Regional Environmental and Social Safeguards Set-up

DO 224 s. 2003 organized the Regional Environmental Impact Assessment Offices (REIAOs). Later on DO 32 s. 2017 renamed REIAO to Flood Control, Social and Environmental Section (FCSES) under Planning and Design Division (PDD) of the Regional Office. From the manual of DO 32 s. 2017, the



Regional PDD coordinates with Regional DENR-EMB offices regarding issuance of ECCs/ CNCs and compliance with ECC provisions. However, the manual does not outline the functions of the FCSES. Hence, the functions of the REIAOs under DO 224 s. 2003 still apply. The creation of the REIAOs by DPWH DO 224 s. 2003 aims to strengthen the capability of the regional offices in carrying out the Department's environmental and social commitments. The REIAOs shall be responsible for implementing the DPWH social and environmental policies in the regional offices, in coordination with the ESSD in the Central Office and under the direct supervision of the Chief, Planning and Design Division, Regional Office.

Functions of the REIAOs:

1. Conduct assessments for environmental and social impact.
2. Prepare Initial Environmental Examinations (IEEs), including Environmental Management Plans and Environmental Monitoring Plans [and now including Project Description (CNC Annex Part I and II)].
3. Assist the EIAPO [now ESSD] in the preparation of Environmental Impact Statements and other similar reports.
4. Conduct consultations and information dissemination programs to project affected persons (PAPs) and other stakeholders.
5. Conduct environmental monitoring and post-implementation evaluation, and monitor Resettlement Action Plan (RAP) implementation.
6. Coordinate with Regional DENR-EMB offices regarding the issuance of Environmental Compliance Certificates (ECCs) and compliance with ECC provisions.
7. Initiate the creation of Multipartite Monitoring Teams (MMTs) [for Category A Project, by DAO 2017-15] in coordination with the Implementing Office and the Municipal RAP Implementation Committees (MRICs).
8. Act as Coordinator of MRICs.
9. Represent the Regional Office in the MMTs and participate in their activities.
10. Act as liaison between the Central Office and District Offices regarding Land Acquisition Plan and Resettlement Action Plans (LAPRAPs).
11. Provide guidance to DPWH staff at the Regional and District levels and coordinate with local government units in carrying out the above studies by preparing required reports and documents, and LAPRAP implementation.
12. Maintain a collection of reports, books, publications, maps and other reference materials related to Environmental Impact Assessment (EIA).
13. Enhance regional capacity in EIA through participation in social and environmental training programs of the Department and other agencies.
14. Coordinate with other DPWH offices, government agencies, local government units, and non-government organizations regarding environmental and social concerns in the region.

The REIAO shall be directly under the supervision of the Chief of the Planning and Design Division of the Regional Office. The existing staff organized for the purpose prior to this Order shall remain within the REIAO. Any required additional staff shall be selected from among those personnel within the region



who have undertaken appropriate training or possess relevant background for environmental and social assessment.

The REIAO shall prepare an annual budget based on its projected operating expenses¹¹, to be included in the overall budget of the Regional Office. In addition, funds needed to perform tasks for specific projects shall be charged against funds of the respective projects. The Program of Works for such project shall include such EIA-related activities with corresponding funds needed.

3.6.8 Environmental Focal Persons (EFPs) of the District Engineering Office

Further to DO 32 s. 2017, a unit called the Environmental, Social and Right-of-Way Unit (ESROW) was organized under the Planning and Design Section (PDS) of the District Engineering Office (DEO). The manual does not outline the functions of the ESROW. But this has been partly addressed by the Memorandum issued by the Undersecretary for Planning, PPPS on 03 August 2018 for the Designation of Permanent and Alternate Environmental Focal Persons (EFPs) in the District Engineering Offices (DEOs), to perform the following functions:

1. Conduct Environmental Impact Assessment (EIA) during the project conceptualization phase and prepare Environmental Documents (IEE and PD) of the assigned projects.
2. Oversee the conduct of Environmental Impact Assessment (EIA) for all Infrastructure Projects of the District Engineering Office (DEO) to ensure the compliance of Presidential Decree 1586, DAO 2003 and DAO 15-2017.
3. Review environmental documents such as IEEC and PD of the District of ECC or CNC application.
4. Apply ECC or CNC online or manually to the DENR-EMB concerned and ensure the issuance of the decision document.
5. Ensure project compliance with the ECC commitments and EMBP conditions of the infrastructure projects of the District.
6. Prepare and submit Rainwater Collection System Status Report of the District quarterly to Regional Office for consolidation and monitoring using rewritable CD (electronic file).
7. Regularly coordinate with the designated Regional Environmental Management Specialist to assist in the implementation of non-structural environmental activities (e.g., Arbor Day, International Coastal Clean-up, World Water Day, etc.)

¹¹ The cost of EIA in World Bank projects typically vary from 0.06 percent to 0.10 per cent of total project costs or from a few thousand dollars for a very small project, to over a million dollars for a large and complex project, which has a significant environmental impact and requires extensive data collection and analysis. Source: Environmental Impact Assessment, Open Educational Resource. United Nations University, RMIT University, and the United Nations Environment Programme (UNEP). http://eia.unu.edu/course/index.html%3Fpage_id=102.html



3.6.9 Regional and District Engineering Offices in the UPMO Implemented Projects

DPWH DO 42 s. 2012 ¹² provides the role of Regional and District Engineering Offices in the UPMO Implemented Projects. To achieve a more transparent, effective and efficient implementation of UPMO projects, the DPWH Regional Director/s and District Engineers are designated as Special Project Monitoring Supervisors for all UPMO projects in their respective area of jurisdiction. As such, the following responsibilities are hereby spelled out in detail:

1. All foreign-assisted projects being undertaken by Unified Project Management Offices (UPMOs) shall be monitored by the Regional Director (RD) and District Engineer (DE) in their area of jurisdiction.
2. Regional Directors and District Engineers must be consulted and involved in the entire project development cycle from planning to implementation stage and shall be furnished with the Program of Works (POW), Plans, Contract and Technical Specifications/documentations of the project before the start of implementation.
3. The Regional and District Offices shall be furnished with Monthly Progress Accomplishment Status Reports by UPMOs concerned. They shall invite the respective Project Directors to attend the Regional Staff Meetings.
4. The District Engineer/s concerned shall be one of the signatories in the final inspection of the project prior to final payment.
5. The District Engineer/s concerned likewise shall be one of the signatories in the inspection prior to the issuance of final acceptance certificate.
6. The Bureau of Construction (BOC) and the Central Procurement Office (CPO) shall be furnished copies of inspection report and final acceptance certificate.

3.7 Safeguards Budget / Funds

Environmental and social safeguards activities shall be supported by Program of Work and Budget. When the project has been identified, the Safeguards Team prepares an Initial Environmental Program of Work as input to project feasibility study, consisting of a list of environmental activities per succeeding project phase, responsible groups and positions, and indicative scale of cost. The nature and scale of activities is commensurate to the nature and scale of potential environmental and social impacts and risks. The inputs to these activities would come from the experience in earlier projects.

To support the safeguards activities at the Project Identification Phase, it is necessary to provide a programmed and contingent budget for the current year when budget proposals are presented in the preceding year's activities for General Appropriation Act (GAA)

¹² This order shall be harmonized in the pertinent provisions of D.O. NO.9 dated 21 February 2011, "Conduct of Pre-Procurement, Procurement and Implementation Activities for DPWH Foreign-Assisted Civil Works Projects" and supersedes Memorandum dated 14 November 1996, "Designation of Regional Directors as Special Project Supervisors for Foreign Assisted Projects in the Region" and shall take effect immediately.



An Annual Environmental Program of Work, which outlines more detailed tasks, is prepared when the project proceeds into the safeguards preparation stage, as in the initial stakeholder engagement (consisting of project announcement, IEC, coordination with various agencies or organizations) and securing environmental certificate (ECC or CNC), permits and endorsements.

Budget or fund for safeguards activities are proposed and approved under the proposed project, and sourced from the Government Appropriations Act (GAA), or foreign assistance. The budget safeguard will also consider the provisions in the DENR-DPWH MOA (1999) for CARI, QRF and EMF.

1. Contractor's All Risk Insurance (CARI) is provided as a replacement to Environmental Guarantee (EGF), to cover expenses for the following: indemnification/compensation of damage to life and property that may be caused by the implementation of the projects and abandonment/decommissioning of the project facilities related to the prevention of possible negative impact.
2. Quick Response Fund (QRF), supplementing CARI, will be used for emergency repairs/restorations of the critically damaged infrastructure facilities after calamity in order to restore mobility and ensure safety in the affected areas.
3. Environmental Monitoring Fund (EMF) for the Multipartite Monitoring Team (MMT) required for Category A projects is organized through the Bayanihan Approach, so that the participating representatives from different entities will charge their cost of participation from their respective offices.



4 ENVIRONMENTAL AND SOCIAL SAFEGUARDS IN OPERATION BY PROJECT PHASE

4.1 Introduction

This section illustrates the listing and timing of safeguard activities by project phase: Project Identification, Project Preparation, Project Implementation, and Project Operation and Evaluation Phase, presented in **Section 3**. The Implementing Office has the option adopt the list of activities in chronological or parallel order. The list and timing of safeguards vary with the nature, scale, and location of the proposed project.

4.2 Project Identification Phase

4.2.1 Early Announcement by Implementing Office to Safeguards Group the Identified Proposed Project

Trigger	A new infrastructure construction project is being conceived or proposed.
Timing	At the project conception day
Objective	To ensure the early preparations to address the environmental and social requirements, starting with the formation of the Safeguards Group (ESSD/FCSES/ESROW)
Output	Written Notice to the Safeguards Group with initial information on the project, with location map
Lead	Implementing Office
Support	Project Development Team
Applicable Annexes	Annex 4-1. Inception Project Fact Sheet
Reference	EMC 2014-005. Revised Guidelines for Coverage Screening and Standardized Requirements under the Philippine EIS System EMC 2007-002. Revised Procedural Manual of DAO 2003-30
Activities:	
	<ol style="list-style-type: none"> 1. Implementing Office sends an internal memorandum to the Safeguards Group, about the proposed project attaching fill out Annex 4-1 which is a table on the project name, nature, scale/size (length/width), location, components, and schedule of the project being conceived. This is supported by the plot of the footprint of the proposed project on a map (1:50,000 NAMRIA topographic map, and satellite imagery with kmz file) showing the likely direct and indirect impact areas (according to Annex 2-2 of DAO 2003-30 Revised Procedural Manual, and DAO 2017-15). 2. The internal memorandum contains an invitation for an Inception Meeting and list of assigned staff to the Project Development Team.
Guidance	
Maps	<ol style="list-style-type: none"> 1. The project location and scale at the conception stage may not be final but provides the Safeguards Group an idea in the composition of a Safeguards Team to be deployed, and succeeding activities, mindful of the possible variances in the project concept 2. A larger scale map would be appropriate for small projects in applying for



	<p>Certificate of Non-coverage under the PEISS.</p> <p>3. See Section 6.2 on base maps</p>
Note	
	<p>Development Planning Division of the Planning Service formulates long and medium-term infrastructure development plans and programs of the Department. If DPWH infra projects are identified by this function, then the plans and programs is best to contain provisions for environmental and social safeguard under the idea of Strategic Environmental Assessment (SEA) in order to provide projections for safeguards budget.</p> <p>The Safeguards Group shall endeavor to know of any proposed project and takes initiative to verify any proposal for appropriate action.</p>

4.2.2 Organizing Project Environmental and Social Safeguards Team

Trigger	Safeguard Group receipt of announcement and invitation memorandum on the Proposed Project
Timing	Within one week after receipt of Project Notice
Objective	To identify the safeguard lead group, team leader and members
Output	<ul style="list-style-type: none"> • Memorandum on the list of members of Safeguards Team with general assignments • Coordination Protocols • Status Report Form • Table of Chronology of Events Log Form
Lead	Implementing Office
Support	Safeguards Group staff
Applicable Annexes	<p>Annex 4.2 Project Basic Information for Screening</p> <p>Annex 4.3 Project Screening for Safeguards Checklist</p>
Activities:	
Assignment of Staff	1. After receiving a notice from the Implementing Office about the proposed project, the Head of the Safeguards Group selects among its staff as members of the Safeguards Team to be assigned to the proposed project
Feedback to Implementing Office	2. The Head of the Safeguards Group sends to the Implementing Office about the notice and invitation to the inception meeting indicating the names of the Safeguards Team.
Preparation for the Inception Meeting	3. In preparation for the meeting, the Safeguards Team prints and initially fill out Annex 4-2, and Annex 4-3.
	4. The Safeguards Team shall also prepare templates for Status Reporting Template and Chronology of Events for the Project
The Inception Meeting	5. During the meeting, the Project Development Team presents the proposed project and the Safeguards Team presents the associated safeguard requirements, Annex 4-2, Annex 4-3 and templates for Status Reporting Template and Chronology of Events for the Project
	6. The Safeguards Team shall request the Project Development Team to fill out and email Annex 4.2 within a week.



	7. The Safeguards Team and Project Development shall agree to schedule a Reconnaissance Survey.
	<p>8. The Safeguards Team and Project Development Team shall agree on coordination protocols the entire project duration, adopting with possible modification present office protocols.</p> <p>The protocols include the medium of communication, the parties to be involved in specific topic, follow ups, frequency of meeting, scheduling of field work, resolution of issues, decision-making, documentation, record keeping, and others.</p> <p>The protocols aim to ensure smooth workflow and good working relationship.</p>
Meeting Report	9. The Safeguards Team prepare and send to Implementing Office a Meeting Report highlighting the items agreed upon.

4.2.3 Project Screening for Environmental and Social Safeguards Requirements

Trigger	It is a good practice to early screen various environmental and social requirements of proposed project regardless of type, scale, location and source of funding. This is a requisite in preparing initial plans for input to Project Master Plan, and Environmental and Social Safeguards Checklist for Project Preparation
Timing	Within a week or two after organizing the Safeguards Team
Objectives	<ol style="list-style-type: none"> 1. To determine project category, applicable EIA certificate, EIA document, Approving Authority under the PEISS 2. To initially list the ECAs in the project site 3. To initially list government clearances, 4. To initially list stakeholder groups
Output	<p>Filled out Basic Information for Screening (Annex 4-2)</p> <p>Filled out Project Screening Form (Annex 4-3)</p>
Lead	Safeguards Team
Support	Project Development Team
Applicable Annexes	<p>Annex 4-2 Project Basic Information for Screening</p> <p>Annex 4-3. Project Screening for Safeguards Checklist</p> <p>PART I. Screening of Requirements under PEISS</p> <p>PART II. Project Thresholds for Coverage Screening and Categorization</p> <p>PART III. Checklist for Environmentally Critical Areas</p> <p>PART IV. Screening of Potential Impacts and Mitigating Measure</p> <p>PART V. Other Government Instruments to Acquire / Comply</p> <p>PART VI. Initial List of Potential Stakeholders</p> <p>PART VII. Initial Technical Inputs to Feasibility Study</p> <p>PART VIII. Inputs to Contracting out Environmental Services in the Project FS Bid Document</p>
References	EMC 2014-005. Revised Guidelines for Coverage Screening and Standardized Requirements under the Philippine EIS System
Activities	



	<ol style="list-style-type: none"> 1. After meeting with the Safeguards Team, the Project Development Team fills out and email Annex 4-2 to the former within a week and prior to Reconnaissance Survey. 2. The Safeguards Team, in coordination with the Project Development Team, finalizes the project location map (NAMRIA topographic map and satellite imagery) covering the watershed and administrative boundaries of the project footprint. 3. Project Development Team shall also share an initial electronic shapefile (kmz file) as a working file. 4. The Safeguards Team and Project Development Team shall then proceed with the Reconnaissance Survey with prior coordination with the LGU, DENR CENRO and Local Security Forces for proposed new long roads located in uninhabited areas like forestland and grasslands. <p>The Survey Team shall bring along the location map of the project and geotagging camera. The team shall hire a local guide, as needed.</p> <p>The survey shall cover project administrative boundaries, landmarks, land use pattern, morphology, elevation, slope, landslide prone areas, vegetation, water bodies and usage, water use, marks of flooded areas, settlement patterns, and cultural heritage. The survey should be able to identify sensitive areas or conditions that would cause adverse influence over the project.</p> <ol style="list-style-type: none"> 5. After the survey Safeguards Team shall fill out Annex 4-3 with supporting documents including the survey report. 4. The Safeguards Team furnishes copy of the filled-out Annex 4-3 to the Project Development Team and other concerned DPWH units.
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4.2.4 Budget Planning for the Safeguards Activities at the Project Preparation Phase

Trigger	To ensure budget is available for safeguards activities at the Project Preparation Phase
Timing	Within one week after Project Screening
Objectives	To list down safeguard activities with costing for the Project Preparation Phase
Output	List of safeguard activities with costing for the Project Preparation Phase
Lead	Safeguard Team
Support	Project Development Team
Applicable Annexes	Annex 4-4. Sample Environmental and Social Safeguards Checklist for Project Preparation Annex 4-5. Sample Safeguard Planning Template
References	
Activities	
	1. The Safeguards Team shall list down safeguards activities with costing in the Project Preparation Stage Using Annex 4-4 and Annex 4-5 .
	2. The Safeguards Team submits the results to Implementing Offices thru Project Development Team for inclusion in the Project Master Plan.
	3. Implementing Office incorporate the results into the Project Master Plan and request for budget for the Project Preparation Phase.

4.3 Project Preparation Phase

Project Preparation Phase consists of project feasibility study, inclusion in the public investment program, fund appropriation, detailed engineering, and inclusion of project in annual program.

Trigger	Project proceeds to Preparation Phase
Timing	Start of Project Preparation
Objectives	<ul style="list-style-type: none"> • Social Preparation • Natural and Social Environments Baseline Data Collection • Detailing Site-specific Impacts and Risks, and Measures • Detailing of Monitoring Activities • Acquisition of Government Clearances, Permits and Authorization • Preparations for Safeguards Implementation
Outputs	<ul style="list-style-type: none"> • Stakeholder Preparation Reports • Baseline environmental and social data • Environmental Management Plan • Environmental Monitoring Plan • Regulatory Clearances, Permits, and Authorization and Compliance Plans to Conditions • Safeguards Implementation Plan (Inventory of Safeguards and Proposed Budget)
Lead	Implementing Office
Support	Safeguards Team, Project Development Team, Other DPWH Units
Applicable Annexes	Annex 4-6. Environmental Management Plan Template Annex 4-7. Environmental Monitoring Plan Template



	Annex 4-4. Sample Environmental and Social Safeguards Checklist for Project Preparation
References	EMC 2007-002. Revised Procedural Manual of DAO 2003-30
Activities	
Stakeholder Preparation	<p>The Safeguards Team and Project Development Team shall plan and carry out the following environmental and social safeguard activities in accordance with the nature, scale and location of the project:</p> <ol style="list-style-type: none"> 1. Stakeholder preparation mainly IEC and consultation involving the following: <ul style="list-style-type: none"> • Local government units in areas where all project facilities are proposed to be constructed/situated and where all operations are proposed to be undertaken • Government agencies with related mandate on the type of project and its impact • Interest group (NGOs/POs) preferably those with mission/s specifically related to the type and impact of the proposed undertakings • Households, business activities, industries that will be displaced • People whose socio-economic welfare and cultural heritage are project to be affected by the project especially vulnerable sectors and indigenous populations • Local institutions (schools, churches, hospital)
Environment Profile	<ol style="list-style-type: none"> 2. Baseline Data Gathering (See Section 6) <p>Detailed baseline data for EIS-required project will be obtained during the preparation of the EIS.</p>
Impact Assessment and Mitigating Measures	<ol style="list-style-type: none"> 3. Detailed Site-specific Impact Assessment and Mitigating Measures (See Annex 4-6)
Social Management Plans	<ol style="list-style-type: none"> 4. Preparation of applicable site-specific social management plans such as Stakeholder Engagement Plan (SEP), SDP, RAP, GAD, IPDP, Cultural Heritage Conservation, Grievance Mechanism, whether for internal use or required by regulations or funding agencies.
Monitoring Plan	<ol style="list-style-type: none"> 5. Detailed Site-specific Monitoring Plan (See Annex 4-7)
Clearances, Permits, Authorizations	<ol style="list-style-type: none"> 6. Acquisition of applicable regulatory clearances, permits and authorizations, as discussed in Section 5, and Compliance Plans to Conditions: <ul style="list-style-type: none"> • Environmental Clearance • PAMB Clearance • NCIP Certification Precondition • NCIP Certificate of Non-Overlap • Special Land Use Permit (SLUP) • Forest Land Use Agreement for Tourism Purposes (FLAgT)



	<ul style="list-style-type: none"> • Foreshore Lease Agreement (FLA) • Area Clearance for Reclamation • LLDA Clearance • Tree Removal or Relocation Permit • Coconut Tree Cutting Permit • Engineering Geological and Geohazard Assessment Report (EGGAR)
Safeguards Inventory	7. Inventory of all safeguards, indicative implementation schedule, and budget estimate (Annex 4-4)
Project Design	8. Conformity of project design with the DPWH requirements, regulatory standards, conditions of acquired government instruments, agreements, requirements of foreign assistance, applicable stakeholder concerns, and other commitments
Safeguard Implementation Plans	9. Drafting of a program of preparedness in implementing the environmental and social safeguards plan, consisting of organizational set-up, functions, and protocols. This includes hiring of additional personnel for community relations, and performance monitoring. The Implementing Office shall ensure the inclusion in the project budget the cost of implementing the plan.
Budget	10. Inclusion of safeguards implementation cost into project proposed budget. The cost of implementing these conditions and mitigating measures in the ECCs and EMPs/EMoPs shall be included in the project budget of the Implementing Office concerned (DO 245 s. 2003).

4.4 Project Implementation Phase

The project implementation phase constitutes fund releases, Right-of-Way acquisition, bidding, contracting, construction, completion and acceptance.

4.4.1 Implementation of Environmental and Social Safeguards Plans

Trigger	Timely compliance with environmental and social safeguards during Project Implementation Phase
Timing	Start of Project Implementation Phase
Objectives	Environmental and Social Safeguards Plans are implemented, monitored, audited, and evaluated
Outputs	<ul style="list-style-type: none"> • Implemented environmental and safeguards • Monitoring Reports
Lead	Implementing Office
Support	Safeguards Team, Project Development Team, other DPWH units
References	Environmental and social safeguards plans prepared during the Project Preparation Stage
Activities	
	The following are among the activities of the Implementing Office
	1. Officially announces implementation phase of the proposed project
	2. Mobilizes thru a meeting the Project Development Team and Safeguards Team and other IO units



	<ol style="list-style-type: none"> 3. Reviews of the inventory and implementation plans of the environmental and social safeguards plans 4. Ensures the bidding and contracting of construction works contain environmental clauses 5. Ensures the adequate availability of resources for the implementation of the safeguards plans 6. Ensures timeliness and soundness of safeguards implementation 7. Ensures implementation of the Stakeholder Engagement Plan and Grievance Mechanism. 8. Ensures timeliness of communications, documentations, reporting, recordkeeping, and record data banking.
Guidance	
Public Disclosure	1. The Implementing Office shall ensure the concerned stakeholders are informed on the start date of construction. This includes billboards in strategic locations viewable by the public (DO_021_s2017) with the location map of the project and the contact number of DPWH Implementing Office.
IEC	2. From time to time, the Implementing Office shall conduct IEC for the stakeholders regarding the status of the project and gather information for any concern especially the neighboring occupants who may be complaining against the performance of contractors.
Grievance Mechanism	3. Billboards should contain the means of communication in elevating concerns to DPWH.
Contractors' Orientation	4. The Implementing Office shall prepare and implement a program for the orientation of contractors and workers inclusive of the ECC, site-specific EMP, and other site-specific safeguards
Monitoring of conditions in the acquired government clearances, permits, and authorizations	5. The Implementing Office, with the assistance of the Safeguards Team shall prepare and implement a program to monitor the compliance of the project to the conditions of other government instruments.
Environmental and Social Environment Monitoring	6. The extent of monitoring should be commensurate with the project's environmental and social risks and impacts.



4.4.2 Quality Assurance Monitoring and Audit of EMP Implementation of Contractors

Trigger	This task defines the administrative procedures for managing contracts. For guidance on monitoring compliance with specific provisions of contracts. Other sections of the manual should be consulted.
Timing	Announced or Spot Check
Objective	To ensure a contractor's compliance with contract provisions on environmental protection and social enhancement
Output	Contractor's Environmental Performance Report
Lead	FCSES/ESROW
Applicable Annex	Annex 4-8: Sample DPWH Environmental Protection Clauses
Activities:	
	A. During bidding process
	1. Revise the sample DPWH Environmental Protection clauses found in Annex 4-8 to apply to the project based on the EMP and the ECC for the project.
	2. Discuss contract clauses with bidders to allow the latter to include realistic costs of complying with contract provisions in their bids.
	B. After awarding
	1. Keep a copy of the contract.
	2. Prepare an overall calendar containing milestones and deadlines for all projects to be monitored. Calendar may cover several years, depending on the contracts. Post calendar in conspicuous location. Check this calendar daily.
	3. Prepare a project contract calendar indicating milestones and deadlines for complying with specific contract provisions. Calendar may cover several years, depending on the contract. Make sure that contract calendar is consistent with calendar for ECC compliance. Provide contractor with the contract calendar.
	4. Prepare a schedule of reminders, notices and inspections based on contract calendar.
	5. Mark key dates indicated in contract calendar in the overall calendar.
	6. Notify contractors of approaching deadlines.
	7. Submit the accomplished checklist to immediate superior

4.4.3 Project Inspection During Pre-construction

Trigger	Civil works contractor advises entry to the project site to start construction
Timing	Prior to entry of civil works contractor
Objective	To evaluate onsite baseline conditions
Output	Accomplished Inspection Checklist for Preconstruction (Annex 4-9)
Lead	Team Leader (assigned by IO)
Support	FCSES/ESROW
Applicable Annex	Annex 4-9: Inspection Checklist for Preconstruction
Activities:	



	1. Consult the contract monitoring calendar to determine the date of the inspection.
	2. Coordinate with regional or district personnel and contractor for accommodations and transportation.
	<p>3. Visit the proposed work camp, equipment depot, waste disposal site, quarries and other facilities. In each site, it is critical to look for the following:</p> <ul style="list-style-type: none"> ▪ Nearby bodies of water that may be contaminated ▪ Homes that will need to be relocated ▪ Protected areas that may be disturbed ▪ Trees and vegetation to be cleared ▪ Historical landmarks that may be violated ▪ Public utilities such as water or power lines that may be damaged ▪ Traffic routes that may be disrupted. <p>Other issues may be determined during the inspection. Appropriate actions should be identified, such as a change in the proposed location of a facility, or the application of mitigation measures (refer to EMP for a list of possible measures).</p>
	4. Quarries and batching plants may require permits from the DENR regional office and from the local government. The inspector should check the status of these permits.
	5. Accomplish the inspection checklist (Annex 4-9) as suggested. Although the focus of the inspection is on identifying potential problems, the inspection should also write down actual observations of the project site in the "Remarks" column
	6. Submit the accomplished checklist to immediate superior
Guidance	
	<p>Materials and Equipment:</p> <ul style="list-style-type: none"> • Map of project site, including Hazard Map • Preconstruction checklist • Tender documents • Camera with geotagging feature • Personal Protective Equipment or PPE (i.e., hard hats, safety shoes, etc.)
Guidance	
	The pre-construction checklist is to be used to guide the inspection, but the inspection team should note that checklist shall not be taken as the sole basis of the activity.



4.4.4 Project Inspection During Construction

Trigger	The inspection is routine activity during construction
Timing	Announced or Spot Check The inspection should be conducted as provided for in the contract but may also be done to coincide with compliance monitoring. Inspections may also be conducted immediately after the occurrence of a natural disaster at the site.
Objectives	To evaluate onsite conditions for compliance with ECC, environmental standards, contractual requirements and other criteria. To check on workers' health and safety and on the overall sanitation and housekeeping practices at the worksites and ancillary facilities.
Output	Accomplished Inspection Checklist for Construction (Annexes 4-10 and 4-11)
Lead	Team Leader (assigned by IO)
Support	FCSES/ESROW
Applicable Annexes	Annex 4-10. Accomplished Inspection Checklist for Construction Annex 4-11. Accomplished Checklist on the Disposal and Stockpiling of Materials Including Parking of Equipment Within the Construction Limits or Vicinity of All DPWH On-going Projects
Activities:	
	1. Consult the contract monitoring calendar or project status to confirm that the project is ready for turnover. Environmental quality monitoring, if called for, may be conducted at the same time as this activity.
	2. Coordinate with regional or district personnel and contractor for accommodations and transportation.
	3. Make use of the checklist (Annexes 4-10 and 4-11) to guide the inspection but watch for problems not covered by checklist. Focus on housekeeping, waste management and worksite safety. Coordinate with the pollution control officer and safety officer. Look for opportunities for reducing pollution and enhancing general environmental conditions.
	4. Make note of positive measures implemented by the contractor that can be applied elsewhere.
	5. Check whether quarries and batching plants are operating with the necessary permits.
	6. In accomplishing the checklist, the inspector should always try to fill up the "Remarks" column with actual observations of the project site
	7. Submit the accomplished checklist to immediate superior
Guidance	
	Materials and Equipment: <ul style="list-style-type: none"> • Checklist • Tender documents • Map of project site • Camera • Personal Protective Equipment or PPE (i.e., hard hats, safety shoes, etc.)



4.4.5 Project Inspection after Construction (Turnover)

Trigger	Inspection after construction focuses on whether the site has been satisfactorily restored to its original or natural state. Ideally, the site should be free of pollution and hazards left over from construction. The result of the inspection is critical because it may become the basis whether the project may be turned over by contractor to the DPWH.
Timing	After construction
Objective	To evaluate onsite conditions for compliance with ECC, environmental standards, contractual requirements and other criteria.
Output	Accomplished Inspection Checklist for Project Turnover (Annexes 4-12 and 4-13)
Lead	Team Leader (assigned by IO)
Support	ESSD /FCSES
Applicable Annexes	Annex 4-12. Inspection Checklist for Project Turnover Annex 4-13. Checklist for Clearing of Project Sites upon Project Completion
Activities:	
Confirmation on the Turnover	1. Consult the contract monitoring calendar or project status to confirm that the project is ready for turnover. Environmental quality monitoring, if called for, may be conducted at the same time as this activity.
Coordination	2. Coordinate with regional or district personnel and contractor for accommodations and transportation.
Conduct of the Inspection	3. Make use of the checklist (Annexes 4-12 and 4-13) to guide the inspection but watch for problems not covered by checklist. Focus on uncollected wastes, abandoned equipment and structures, fuel storage areas, excavations and other remnants that can cause pollution or pose hazards. Place in map and take photos of areas that need to be rehabilitated or restored. In accomplishing the checklist, the inspector shall always try to fill out the "Remarks" column with actual observations of the project site
Submission of Checklist	4. Submit the accomplished checklist to immediate superior
Guidance	
Materials to Use	<ul style="list-style-type: none"> ▪ Checklist ▪ Tender documents ▪ Map of project site ▪ Camera with geotagging feature ▪ Personal Protective Equipment or PPE (hard hats, safety shoes, etc.)



4.4.6 Environmental Quality Measurements During Emergency Response

Trigger	After the occurrence of a natural disaster such as an earthquake or typhoon, rehabilitation works may have to be urgently undertaken on a completed structure. One problem during such an emergency is that while the scale of the civil works can be significant, public interest may call for immediate action without going through the permitting processes usually required for major projects. Strong coordination with the DENR and making sure that the standard EMP is enforced while the repair work is undertaken are major themes of this task.
Timing	Right after the natural disaster
Objective	To ensure and monitor the implementation of environmental management measures during the conduct of emergency repair
Output	Report on the Results of Measurements
Lead	Responsible Person: District Office
Support	FCSES/ESROW
Activities:	
Site Assessment	1. Determine the nature and scale of the damage, the repair work that needs to be undertaken, and the schedule of the work.
Notification	2. Prepare a letter formally notifying the regional DENR office that emergency repair or rehabilitation activities are to be undertaken. Describe in full the activities and provide strong justification why the repair work is to be undertaken immediately. Invite the DENR to inspect the repair work.
Environmental Quality Measurement	3. Mobilize a team to conduct air, noise and water quality measurement, whichever is applicable.
Measurement Report	4. Prepare a measurement report according to the recommended templates. Identify any opportunities for improving DPWH's response to such emergencies.



4.4.7 Preparation of Environmental and Social Safeguards Work Program and Budget Proposal for the Following Year

The Safeguard Team shall prepare Environmental and Social Safeguards Work Program and Budget Proposal for the following year, with the review and approval and inclusion in GAA proposal by the Implementing Office.

4.5 Project Operation and Evaluation Phase

The Safeguards Team shall monitor of the status of the infrastructure project (e.g., observed functionality, integrity, public safety, impacts and potential risks). The output is Report on the Status of the Infrastructure Project. The frequency, monitoring parameters, monitoring frequency, cost, and format of the report vary with the type of the project,



5 GOVERNMENT REGULATORY INSTRUMENTS (CERTIFICATIONS, PERMITS, AUTHORIZATION)

5.1 Introduction

This section provides guidance on the documentary requirements and procedures on several regulatory environmental certifications, permits, and authorization, collectively called instruments, acquired during the Project Preparation Stage to ensure inclusion of the project budget the cost of implementing the conditions of the instruments. By DO 57 s.2016, all Implementing Offices shall conduct environmental assessment, prepare the necessary environmental document and secure the corresponding environmental clearance whether ECC or CNC prior to project implementation. Implementing Offices with the support of Safeguard Group and other DPWH units shall ensure the processes below are verified early with the responsible government office for any variation.

These instruments include:

1. Environmental Certification (ECC or CNC),
2. PAMB Clearance
3. NCIP FPIC/MOA/Certification Precondition
4. NCIP Certificate of Non-Overlap
5. Special Land Use Permit (SLUP)
6. Forest Land Use Agreement for Tourism (FLAgT)
7. Foreshore Lease Agreement (FLA)
8. Area Clearance for Reclamation
9. LLDA Clearance
10. Tree Removal or Relocation Permit
11. Coconut Tree-Cutting Permit
12. Engineering Geological and Geohazard Assessment Report (EGGAR)

5.2 EMB Environmental Certifications (CNC and ECC)

5.2.1 Application for Certificate of Non-Coverage (CNC) for Category D and C Projects

Overview. Category D projects under the PEISS are not required to secure an ECC but may secure a Certificate of Non-Coverage in accordance with EMC 2015-003 Implementation of Online Processing Certificate of Non-coverage (CNC) Applications for Category D Projects under the Philippine Environmental Impact Statement System (PEISS). The issuance requires the application online, with the procedures present in **Annex 5-1**.

Documentary Requirements.

- Project Size/Capacity (length in km, area in ha, volume capacity in m³)
- Valid Government ID
- Site Development Plan
- Geo-tagged photograph of the project taken within the last 15 days



- Notarized Accountability Statement
- Proof of Payment (P1,000 for Category C project; P1,210.00 for Category D Project per DAO 2016-28)
- PAMB clearance (for areas under NIPAS)

Procedure, Online Application

1. Encode in a web browser the following URL:

<https://cnconline.emb.gov.ph/projectchecker/OnlineApplication.aspx?GUID=5d971fdd-86aa-4e4c-bad7-1fdf93ad55da>

This will show the webpage for Project Threshold for Coverage Screening and Categorization

2. On the left side of the screen, select the Project Type, while on the right side the Project Size. This may already show if the project is required an ECC. If not, the Screening Question Page will be shown.

3. Tick the Yes and No answer in the following Screening Questions:

- a. Is the project intended to directly enhance the quality of the environment or address existing environmental problems? (Clicking Yes in this question automatically shows the project is Category C and advises to apply CNC through email to EMB Regional Office.)

Inquire with EMB Regional Office for application for CNC for Category C project. The application entails the manual submission of 2-page application form (**Annex 5-2**) based on EMC 2014-005, supported by other documents below (Item 10).

- b. Does your project have existing ECC or part of a project that requires an ECC?
(Project with existing ECC may apply for amendment or relief at the office with jurisdiction over the project area prior to applying for CNC)

- c. Is the project area (total floor area of all structures plus open areas) greater than (1) hectare?

- d. Is the project located in National Integrated Protected Areas System?

(A PAMB clearance is required during the application if project is located in NIPAS.

Click here to check if your project is within NIPAS & coordinate also with Biodiversity Management Bureau to confirm.)

- e. Does the project use or stores toxic and hazardous materials or substances?
(Including those in chemical control order (CCO) and Priority Chemical List (PCL) per R.A. 6969 and its IRR)
- f. Are selected project type, proposed size, and other information indicated above, correct?



There will be pop ups should the project is required an ECC.

4. Click Verify Correct to show the page for Application for Certificate of Non-Coverage (CNC)
5. Fill out the space provided for Project Identity and Proponent Information, with consequent appearance of Validation Code.
6. Click Save and Request Order of Payment to go to the next page
7. Download Order of Payment and pay the application fee
8. After payment go back to the application online and click "Update Payment or Track Status of your CNC Application"
9. Encode the Application Reference No. and Order of Payment, the Click "Update Payment"
10. Encode Payment Information and upload the following and click submit supporting documents, to go to the next page and to download the CNC:
 - Project Size/Capacity (length in km, area in ha, volume capacity in m³)
 - Valid Government ID
 - Site Development Plan
 - Geo-tagged photograph of the project is taken within the last 15 days
 - Notarized Accountability Statement
 - Proof of Payment
 - PAMB clearance (for areas under NIPAS)

5.2.2 On-line ECC Acquisition for IEE Checklist-Required Project

Overview. Projects classified as Category B under the PEISS will be required an Initial Environmental Examination for the issuance of their ECC as stated in EMB MC 2015-008. **Annex 5-3** shows the ECC Online User's manual to serve as guide for the online application while **Annex 5-4** shows the sample IEE Checklist for Road Projects.

Documentary Requirements. The minimum requirements for the application based on the memorandum circular are as follows:

- Project Description
- Environmental Impact and Management Plan (System-generated form)
- Abandonment/Decommissioning/Rehabilitation Information (System-generated form)
- Geo-tagged photo of the project site taken for last 30 days
- Topographic Map (at least 1km from project boundaries)



- Certification from LGU on the compatibility of proposed project with existing land use plan
- Site Development and/or Vicinity map signed by registered professionals
- Project/Plant layout signed by registered professionals
- Schematic diagram of wastewater treatment facility
- Schematic diagram of air pollution control facility
- Organizational Chart in charge on environmental concerns
- Proof of authority over the project site (land title, lease contract, deed of absolute sale, etc.)
- Duly notarized accountability statement of proponent System-generated form
- Duly accomplished project environmental monitoring and audit prioritization scheme (PEMAPS) questionnaire (System-generated form)
- IEE Checklist Sworn Statement (System-generated form)
- Affidavit of No Complaint
- Project Components & Operation Information (System-generated form)
- Proof of Payment (P5,000 per DAO 2016-28)

The submission of the minimum requirement is subject to the evaluation of the concerned EMB Regional Office and additional information may be requested based on the submitted information. System-generated forms will automatically be provided by the system *once* you have reached and saved Step 6 of the application process.

5.2.3 ECC Acquisition for EIS-Required Projects

Overview. Annex A of EMC 2004-15 requires the submission of EIS for ECC application for Category A Projects and certain Category B Projects (scale).

Documentary Requirements. Typical documents to submit along the submission of application and processing of application include

1. Inception IEC/Consultation Report for social preparation
2. Project Description for Scoping
3. Public Scoping Report
4. Technical Screening Checklist (with EIARC)
5. Proof of Payment for Application Fee and Review Fund
6. MOA with the Review Fund Manager
7. Draft EIS
8. Response to EIARC Request for Additional Information
9. Response to Public Comments on Draft EIS
10. Public Hearing Report



11. Final EIS

Procedure. The following is the procedure for EIS-required ECC application according to EIAMD Citizen Charter.

Client Steps	Agency Action	Fees	Processing Time	Person Responsible
SCOPING				
Public Scoping	Reviewed submitted Public Scoping Report			
Technical Scoping	Technical Scoping to identify the Terms of Reference (TOR) or coverage of the EIA Study			
Submission of EIS / EPRMP to EMB by the Proponent	EMB Procedural Screening (1st, 2nd, 3rd, until determined to be completed)			Case Handlers EIAMD Technical Staff
	Once accepted, provide the necessary number of copies	10,000.00		
	Convene EIA Review meetings, preparation of schedules	Review Fund (variable)	1 day	EIAMD Technical Staff
	Distribution of EIS document		1 day	EIAMD Support Staff
	EIS Document review of the EIS/EPRMP by the EIARC members and Resource Persons		3 days	EIAMD Technical Staff EIARC Members EMB Hearing Officer
	REVIEW & EVALUATION PROCEDURE		20 days	
	1st EIARC Review Meeting			
	Public Hearing and Site Visit			
	Preparation of Hearing Officer Report			
	2nd EIARC Review Meeting (Final Meeting)			
Drafting of Decision Folder	Preparation of Decision document			
Finalization of Decision Document	Decision Folder reviewed for endorsement to the Office of the EMB Director			Chief, EIAMD
- Review Process Report - Complete Staff Work				



Client Steps	Agency Action	Fees	Processing Time	Person Responsible
	Decision document for final review and for endorsement to DENR to secure the Authority to Sign		5 days	EMB Director
	Request for Authority to sign ECC forwarded to DENR thru the DENR USECs			(c/o Records) Undersecretaries
	DENR provided EMB an authority to sign the ECC or Letter of Denial Authority to sign ECC given to EMB Director			DENR Secretary (c/o Records) EMB Director
	Signed ECC for barcoding			DENR CO
	ECC for RELEASE	Total		EMB Records 40 days

Source: <https://emb.gov.ph/wp-content/uploads/2020/07/Citizens-Charter-EIAMD.pdf>

For guidance in the procedure, the following are discussed in the sections below

1. Contracting out of the EIS and ECC Acquisition (DPWH practice)
2. Social Preparation
3. Request for Scoping
4. Public Scoping
5. Technical Scoping
6. EIA Study and EIS Preparation
7. EIS Submission
8. EMB Case Handler Procedural Review
9. Payment of Filing Fee and Review Fund Deposit
10. EIARC Substantive Review
11. Endorsement and Decision Making
12. Distribution of EIS to Stakeholders

5.2.3.1 Contracting of EIS and ECC Acquisition

The preparation of an EIS and acquisition of an ECC for a proposed Category A Project is normally contracted out to an environmental consulting firm which can organize EIA preparers which may be consisting of the following:

1. Project Manager
 - Overall compliance with the Terms of Reference of EIA services Terms of Reference, deliverable, timelines, budget.
 - Oversee the roles, responsibilities, work relationships, work supports, engagement welfare of the team.



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| 2. Project Technical Team Leader | - Observance of technical performance of the specialists. |
| 3. Land Use/Agri/ Watershed Specialist | - Land Use and Classification module |
| 4. Geologist | - Geology/geomorphology/ module |
| 5. Pedologist | - Handles the Pedology module |
| 6. Terrestrial Flora Specialist | - Terrestrial Flora Module |
| 7. Terrestrial Fauna Specialist | - Terrestrial Flora Module |
| 8. Hydrologist | - Hydrology Module |
| 9. Water Quality Specialist | - Water Quality Module |
| 10. Freshwater Biology Specialist | - Aquatic Ecology Module |
| 11. Physical Oceanographer [if project is in the coastal area] | - Physical Oceanography Module |
| 12. Marine Biologist [if project is in the coastal area] | - Marine Biology Module |
| 13. Air Quality Specialist | - Climate, Air Quality, Noise Module |
| 14. Socio-econ/Health/Perceptions Specialist | - The People Module |
| 15. Environmental Risk Assessment Specialist | - ERA Section |
| 16. Peer Reviewer | - Review of the entire EIS |
| 17. GIS Specialist or Cartographer | - Map production |
| 18. Research Assistants | - Data gathering, module site-coordinator drafting of module, |
| 19. Logistics Assistant | - Logistical provisions |

Normally, many of the specialists are freelance or academicians pooled together for the EIS. According to EMC 2011-005, "effective 1 January 2012, for ECC applications requiring the preparation of EIS, at least 60% of the EIA Study Team, as listed in the accountability statement, shall have attended and complete training conducted by EMB CO/ROs, or other institutions recognized by EMB CO/ROs on EIA DRR/CCA Technical Guidelines using prescribed training modules."

The Implementing Office shall provide Preparers the following:

- i. Office orientation about the proposed project for the specialists be able to clarify on the terms of reference of the services, ascertain aspects of the proposed infrastructures, identify information and documents needed from the proponents, potential issues and limitations, coordination protocols, and others.
- ii. Site orientation.
- iii. Project information normally in established designs and mitigating measures.
- iv. Introduction of the consultants to government and private stakeholder with official letter.
- v. Presence of proponent during stakeholders' events like IEC, public scoping, technical scoping; public hearing, EMB review of the EIS;
- vi. Signatures in official correspondences; and
- vii. Continual coordination of in the EIA process, especially during field data gathering.

The Implementing Office, with the assistance of the Safeguard Group and Project Development Team, shall provide the consultant project information for the compilation (**Box 5-1**).



Box 5-1. EIS Outline for Project Description

1.	Project Description
1.1	<p>Project Location and Area</p> <ul style="list-style-type: none"> • Map showing sitio, barangay, municipality, province, region boundaries, vicinity, proposed buffers surrounding the area and Primary & secondary impact areas • Geographic coordinates (shape file data) of project area • Rationale for selection primary & secondary impact areas
1.2	<p>Project Rationale</p> <p>Cite and focus on the need for the project based on national and local economic development and in terms of contribution to sustainable development agenda or current development thrusts of the Philippines</p>
1.3	<p>Project Alternatives</p> <ul style="list-style-type: none"> • Cite criteria used in determining preliminary options for facility siting, development design, process/technology selection, resource utilization including discussion of the consequences of not proceeding with the project • Reasons for selecting the preferred options delineated in terms of technical, commercial, social and natural environmental aspects • summary of the comparative environmental impacts of each alternative
1.4	<p>Project Components</p> <ul style="list-style-type: none"> • Major components • other Support Facilities (Le. energy/power generating facility, water supply system) • Pollution control devices and corresponding facilities being served or connected • Footprint of proposed layout of project facilities
1.5	<p>Process/ Technology Options</p> <ul style="list-style-type: none"> • Production process (indicate type of raw material & final product) if process industry; Construction if infrastructure such as buildings, roads & bridges • Power generation & water supply system • Waste Management Systems
1.6	<p>Project Size</p> <ul style="list-style-type: none"> • total project area in square meters or hectares • annual production rate & working days/hours if process industry
1.7	<p>Development Plan, Description of Project Phases and Corresponding Timeframes</p> <p>Phases to be described in terms identifying specific activities (w/ special attention on those with significant environmental impacts) and corresponding projected implementation timeframes:</p> <ul style="list-style-type: none"> • Pre-construction (planning, acquisition of rights to use land,) • Construction (land/site clearing, temporary housing, transport of materials, health and other services for the workforce) • Operation (projected period of start-up/commissioning/full operation of various project components) • Abandonment (Land/soil restoration, decontamination or remediation activities and procedures & projected year of Abandonment).
1.8	<p>Personnel</p> <p>Tabulate the following per project phase:</p>



	<ul style="list-style-type: none"> • personnel requirements. • expertise/skills needed. • nature & estimated number of jobs available for men, women indigenous peoples (if sited in IP ancestral land). • preferred scheme for sourcing locally from host and neighboring LGUs and those from outside
1.9	Indicative Project Investment Cost
	Reference: DMC 2010-14

5.2.3.2 Social Preparation / IEC

Social preparation and the conduct of IEC activities in the PEISS context are conducted prior to the conduct of the formal scoping process. In general, it aims to provide identified project stakeholders information about the project. It also serves as an initial venue for the stakeholders to provide their issues and concerns about the project for consideration in the conduct of the EIA.

DENR DAO 2017-15 and EMB MC 2020-30 provide the minimum guidelines for the conduct of the social preparation and IEC activities and main points discussed below.

5.2.3.2.1 Stakeholder Identification

Box 5-2 is a guide in listing the initial stakeholders for a proposed project. The identification starts from the delineation of direct and indirect impact areas as demonstrated in **Annex 5-5** (RPM Annex 2-2). They will be listed using the RPM pro-forma stakeholder identification matrix (**Annex 5-6** (RPM Annex 2-3)), with the following column headings: (i) potential impact areas, (ii) basis for selection of sector as a stakeholder of the project, (iii) Sectors/subsectors identified by Proponent to be likely stakeholder of the Project, and (iv) Specific Organizations/Entities likely to be Invited to IEC/Site Scoping as Representing the Sectoral Stakeholders.

Box 5-2. DAO 2017-15 Section 5 provisions on Initial Stakeholder Identification

	Section 5. Initial Stakeholder Identification
	Initial stakeholder identification shall be done to identify target groups for the IEC.
5.1	The IEC shall be conducted in the project area and the area where all project facilities are proposed to be undertaken (e.g., in mining areas, this can include the entire block proposed to be mined and areas outside the block, where auxiliary facilities may be sited such as power plant, access roads, administrative building site, any coastal stockyard, pier/causeway, anchorage area, quarry area, crusher or batching plant, tailings storage facilities). This shall be the EIA Study Area.
5.2	<p>At the minimum, the following groups shall be the audience of the IEC:</p> <ul style="list-style-type: none"> a) Local government units in areas where all project facilities are proposed to be constructed/situated and where all operations are proposed to be undertaken b) Government agencies with related mandate on the type of project and its impact



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| c) | Interest group (NGOs/POs) preferably those with mission/s specifically related to the type and impact of the proposed undertakings |
| d) | Households, business activities, industries that will be displaced |
| e) | People whose socio-economic welfare and cultural heritage are project to be affected by the project especially vulnerable sectors and indigenous populations |
| f) | Local institutions (schools, churches, hospital) |

5.2.3.2.2 *Information and Education Campaign*

The IEC aims toward finalizing the list of stakeholders to be invited in the Public Scoping and surfaces the preliminary key environmental issues by sectoral stakeholders, with the goal of promoting public participation, and with the information as reference in preparing for Public Scoping. The IEC Report will include a table on (i) covered LGU, (ii) actual IEC date, (iii) issues raised/suggestions provided, and (iv) proponents response (**Annex 5-7** (RPM Annex 2-4).

IEC materials include among others, Power Point slides, tarpaulin and leaflets/flyers, and two-page local dialect IEC material, containing project location map and guidance on the local participation in the EIA process. The content of the IEC materials will be guided by the DAO 2017-15 Sec 6 (**Box 5-3**).

Box 5-3. DAO 2017-15 Section 6 - provisions on IEC

Section 6.	Information and Education Campaign (IEC)
6.1	<p>Information and Education Campaign (IEC) shall be conducted in preparation for the public scoping by providing then with information about the project, the proponent and the scoping process. At the minimum, the following information shall be provided:</p> <ul style="list-style-type: none"> a) Purpose of EIA as stipulated in PD 1151 and 1586 b) Need for the project, its goals and objectives c) Alternative being considered by the Implementing Office on the following <ul style="list-style-type: none"> • project type, components and size • process/technology (including toxic chemicals that will be used or produced and may be released to the environment) • resource utilization (water, energy, etc.) d) Proposed location of project facilities/components and alternatives considered prior to the selection e) Implementing Office (indicate incorporators, subsidiaries) f) Projected time frame of the project phases g) Preliminary identified environmental aspects for each alternative
6.2	<p>The IEC shall be in English and/or in Filipino or in local language and shall be conducted through the following means:</p> <ul style="list-style-type: none"> a) Field visits to the project site/s, meetings with traditional and political leaders, informal dialogues with community members, community meetings or "talking barangay". At the minimum, key informant interview (KIIs) shall be conducted.



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| b) | Use of appropriate IEC materials such as film or video showing, printed media or local radio. Other forms of information dissemination that can be used include streamers, exhibits, exhibits and leaflets/flyers. |
| 6.3 | During the IEC activities, further information may be gathered to enhance or update the description of the project locations, project alternatives and the identification of environmental aspects |

5.2.3.3 Request for Scoping With EMB

In the PEISS context, scoping involves the conduct of public scoping wherein key stakeholders are identified and consulted and the perceived impacts of the project and relevant key issues that need to be addressed in the environmental assessment are identified.

A technical scoping with the EMB is also conducted integrating concerns from the public scoping into a technical scoping checklist which serves as the terms of reference of the environmental assessment and is the basis for the review of the conducted environmental assessment.

5.2.3.3.1 Public Scoping

Before the Public Scoping

After the conduct of IEC activities, a formal request (**Annex 5-8** (RPM Annex 2-5) for the conduct of Scoping Activities should be undertaken, supported by a Project Description with outline presented in **Annex 5-9** (RPM Annex 2-6). **Box 5-4** shows the supporting documents specified in DAO 2017-15 Section 7 on requirements prior to public scoping. The concerned EMB office will evaluate and decide on the submitted request for Scoping within five (5) working days and will post the announcement for the Public Scoping at least ten (10) days before the Public Scoping.

Box 5-4. DAO 2017-15 Section 7 on Requirements Prior to the Public Scoping

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| Section 7. | Requirements Prior to the Public Scoping |
| 7.1 | Request for public scoping shall be submitted for approval to the EMB Office with jurisdiction over the processing of the ECC application within three (3) months prior to the conduct of social preparation. The following shall be submitted with the letter of request: <ul style="list-style-type: none"> a. Proof of conduct of IEC <ul style="list-style-type: none"> 1) Documentation of FGDs conducted, at the minimum, represented by stakeholder groups identified based on the guidelines on Section 5 2) Documentation of IEC including a proof of receipt of IEC materials by LGU and other stakeholders [RPM: Summary IEC documentation, Annex 2-4] b. Initial perception survey results at the minimum indicating the baseline knowledge about the project, concerns/questions about the description of the project alternatives and concerns about the environmental impacts of the project using accepted methodology c. Project Description for Scoping (PDS) containing at the minimum, the following information <ul style="list-style-type: none"> 1) Need for the project, its goals & objectives 2) Alternatives being considered by the Implementing Office on the following |



	<ul style="list-style-type: none"> • project type, component and size • process/technology (Including toxic chemicals that will be used or produced and may be released to the environment) • resource utilization (water, energy, etc.)
	3) Proposed location of project facilities/components and alternatives considered in the decision
	4) A map (e.g., google) showing the project site/s and the proposed EIA Study Area [RPM: Map and Description of Preliminary Impact Areas per Annex 2-2]
	5) Aerial photos of the project site taken not more than 90 days from submission, at the minimum, showing households, business activities and industries, that will be displaced as well as local institutions (schools, churches, hospitals)
	6) Implementing Office (indicated incorporators, subsidiaries)
	7) Projected timeframe of the project phases
	8) Preliminary identified environmental aspects for each alternative
	d. Proposed list of invitees for the public scoping, at the minimum representing the groups listed in Section 5.2
	e. Draft invitation letter to be signed by EMB, and IEC materials in preparation for the public scoping
	f. Draft presentation of the project during public scoping
7.2	The EMB Office with jurisdiction over the processing of the ECC application shall evaluate the proofs of the conduct of IEC and ensure the completeness of the PDS and the list of invitees for the public scoping, among others.
7.3	<p>The EMB shall decide on the approval of request on the conduct of the public scoping within five (5) working days and shall post an announcement for the public in the EMB Website at least 10 days before the public scoping containing the following information along with the e-copy of the {PDS):</p> <ul style="list-style-type: none"> - Importance of EIA particularly the scoping process - Date and venue of public scoping - Instruction and deadline for the registration of intent to comment - Instructions and deadline for submitting comments. <p>The proponent shall simultaneously disseminate information in the Project Area. The PDS shall remain in the Website until the submission of the ECC application;</p>

During the Public Scoping

The following are the minimum guidelines in the conduct of the Public Scoping:

- a. The Public Scoping shall be conducted in a public facility within the project site or in the nearest appropriate place to address inaccessibility, security risk or other site condition concerns.
- b. The Public Scoping will be facilitated by the concerned EMB Regional Office and will include, at the minimum, the following:
 1. Brief presentation by EMB-RO of the EIA Process focused on the Scoping process and objective of the Public Scoping.
 2. Presentation by the Proponent of the Project Description.
 3. Open Forum for at least 2 hours.



4. Presentation by the EMB-RO representative of summary of issues and concerns during the open forum.
5. Response of the Proponent regarding concern that can be integrated in the EIA and how the concerns be addressed and the possible modes of participation of stakeholder in the actual conduct of the EIA; and
6. Closing the public scoping by the EMB-RO by summarizing the agreements and presenting succeeding steps.

A tabulated program with guidance is shown in **Annex 2-10** (RPM Annex 2-9).

After the Public Scoping

Within (10) workings days after the Public Scoping, a Public Scoping Report (PSR) for ECPs shall be submitted to EMB CO, while seven (7) working days for EMB RO for non-ECPs. The PSR shall contain the following:

- a. attendance of stakeholders and the general public (description of stakeholder sectoral representation during the public scoping vis-a-vis the identified stakeholders based on Section 5 [of DAO 2017-15])
- b. Segregated comments, issues raised, and suggestions based on the main modules of the EIA: Project Description, Land, Water, Air, and People. The sector or persons who raised the comments, issues or suggestions along with the proponent's response shall be noted. (**Annex 5-11** (RPM 2-7c))
- c. The proposed design of public participation and analysis of issues raised by stakeholders using appropriate methods (to be discussed during the technical scoping)

The EMB Office will evaluate and decide on the completeness of the PSR within three (3) working days.

5.2.3.3.2 Technical Scoping with the EMB and EIARC

Within seven (7) workings days after the approving the PSR, the EMB shall convene a Technical Scoping with the Proponent and EIA Review Committee to discuss the technical scope of the EIA, integrating the issues and agreements during the public scoping, assessing the attendance of the stakeholders, with the use and later signing on a Technical Scoping/Screening Checklist as the Terms of Reference for the EIA (**Annex 5-12**, as example from EMC 2011-005).

5.2.3.4 EIA Study and EIS Preparation

5.2.3.4.1 Project Description

The project description contains information that describes the activities and components of the proposed project, as presented in **Box 5-1**.



5.2.3.4.2 Baseline Characterization

The existing baseline environmental conditions without the project will provide benchmark information on the possible effects and impacts of the project on the environmental and social conditions during the project pre-construction, construction, operation and abandonment phases. Hence, the scope of the baseline characterization should cover as much of the physical, biological, social, and cultural information in the project area. The following must be considered in the establishment of baseline environmental characteristics:

- Accuracy, reliability and sources of data-primary information for environmental aspects that will be significantly impacted should be secured while secondary information should only serve to supplement or provide a general background for the study area. This will serve as guide for future monitoring of project impacts.
- Scope and extent of environmental characteristics to be established. This should include the following:
 - Spatial - physical boundaries of the study area. Assessment should not be limited to the project footprint but should also consider project impacts not within the physical scope of the project site (i.e., construction impacts downstream of project site, dust and noise impacts to nearby communities, projects within protected areas)
 - Temporal - assessment should cover environmental characteristics covering different time periods, i.e., seasonal variation in present flora and fauna during wet and dry seasons, wind direction during different months, water quality during wet and dry season).

5.2.3.4.3 Impact and Risk Assessment

Analysis of the impact of the project follows the establishment of the baseline environmental characteristics. It should be noted that the listed impacts in the Scoping/Screening Checklist may not be exhaustive and does not necessarily apply to all sites. It should also be noted that there may be impacts not listed in the matrix but are present nonetheless in some project sites. The matrix should be regularly updated for such unidentified potential impacts.

5.2.3.4.4 Environmental Management and Monitoring Plan

The Environmental Management Plan will operationalize the identified mitigating measures for the identified impacts. A clearly defined EMP should contain the following:

- *Project impacts from different project activities* - should consider all project impacts from the various project phases (preconstruction to abandonment). **Annex 5-13** (RPM Annex 2-17) is a matrix of Impact Management Plan (IMP) Matrix.
- *Impact-specific management measure* - should be able to address the identified impact. If impact is not totally avoidable, cumulative and residual impacts should be assessed. Acceptable levels of cumulative and residual impacts should be identified.



- *Monitoring program*-includes specific parameters to be monitored, monitoring methods, national regulations to be complied/performance indicators, sampling location, frequency, source of funding and organizational responsibilities for monitoring. **Annex 5-14** (RPM Annex 2-20) is matrix for the environmental monitoring plan (EMoP) with Environmental Quality Performance Levels (EQPLs).
- *Management commitment for the implementation of the EMP*-this will include providing sufficient capability development and training for those who will implement the EMP and monitoring programs. This will also include the mechanism on how management intends to undertake corrective measures if there are deficiencies or non-compliance to regulations and requirements.
- *Implementation schedule*-identification of which management measure to be implemented during a particular project phase.
- *Funding mechanism and commitments* – this is to ensure monitoring activities are sufficiently funded and should be included in the project cost. Funding should be allocated to both the implementation of management measures and for the monitoring activities. Contingency should also be allocated in the event that corrective actions are necessary.
- *Reporting Requirements* – reporting of monitoring activities can be undertaken semiannually or annually, depending on the requirement of specific agencies. Under the PEISS, submission of the Self-Monitoring Report and Compliance Monitoring Report (CMR) as discussed in **Section 5.3.2**.

5.2.3.4.5 Social Development Plan and IEC

The SDP of the project shall be derived from and aligned with the LGU's existing SDP. The project's SDP normally aims to prevent/mitigate and/or enhance a project's adverse and positive impacts, respectively, on people's livelihood, health and environment. The process of formulating the project's SDP shall be actively participated in by City/Municipal Development and Planning Officer (MPDO) and/or other Government Agencies whose mandates cover the management of impacts posed by project operations. **Annex 5-15** (RPM Annex 2-18) is a template for the Social Development Plan (SDP). IEC is a continuing activity for the project, with a plan as IEC Plan prepared using a template provided as **Annex 5-16** (RPM Annex 2-19)

5.2.3.4.6 Project Environmental Monitoring and Audit Prioritization Scheme (PEMAPS)

With the so many projects nationwide, EMB has devised a prioritization scheme in monitoring projects. Thus, part of the submissions is EIS or even the EIS is the filled out, signed and notarized PEMAPS Questionnaire shown in **Annex 5-17** (RPM 2-7d).



5.2.3.4.7 Accountability Statements of the Proponent and Preparers

Part of EIS is the signed and notarized accountability of statements of the Proponent (**Annex 5-18** (RPM Annex 2-21)), and Preparers (**Annex 5-19** (RPM Annex 2-22))

5.2.3.5 Submission of Draft EIS to EMB and Procedural Review

Prior to the submission of the Draft EIS to EMB, the Implementing Office shall provide a copy to Regional and District Offices for review. Then, the Implementing Office submits one (1) copy of EIA Report, and filled-out Technical Screening Checklist, with a cover letter. The EMB Case Handler will determine the completeness of the EIS document prior to acceptance of the document. Upon acceptance of the EIS, the EMB will inform the DPWH on the number of copies to be provided and instruct DPWH to pay the processing fee and review fund to the third-party fund manager designated by the EMB.

5.2.3.6 Payment of Filing Fee/ Set-Up of Review Fund

The Implementing Office shall pay EMB the processing fee for the application of the ECC. Upon proof of payment, EIAMD estimates the Review Fund and signed off by the EIAMD Chief. The Implementing Office with the DENR-EMB Fund Manager then enters into a Memorandum of Agreement. Guidelines in setting up the Review Fund are presented in **Annex 5-20** (RPM Annex 2-23).

5.2.3.7 Substantive Review, Site Visit, Public Consultation or Public Hearing

The processing duration of the EIS-based application until ECC issuance is set for calendar 40 days (DMC 2010-14). According to the RPM the review of the EIS consists of the following activities:

- i. Reconvening of Review Team (RT) and Distribution of EIA Report copies to RT members
- ii. Review Proper by Review Team (EMB CH, EIARC, RP)
- iii. 1st Review Team Meeting
- iv. Site Visit (SV), Public Consultation (PC) or Public Hearing (PH)
- v. 2nd/ 3rd Review Team (RT) Meeting
- vi. Submission of EIARC Report by EIARC Chair
- vii. Submission of Review Process Report (RPR)/ Recommendation by EMB Case Handler

The EMB Case Handler (CH) will reconvene the EIA Review Committee (EIARC), invite a Resource Person (RP) and inform the Implementing Office of the 1st Review. Refer to **Annex 5-21** (RPM Annex 2-25) on the prescribed program for EIARC Meetings, responsibilities of the Review Team with criteria and guidance on the conduct of review and evaluation. The EIARC tabulates additional information (AI) as **Annex 5-22** (RPM Annex 2-24). The pre-selected EIARC Chair consolidates the comments for submission to EMB within five (5) days. Representatives from the LGU and EMB Regional Office may be invited in the review as resource persons (DMC 2010-002).



Site visit will be scheduled but usually on the same day as the conduct of the public consultation or hearing. In all of these cases, the Implementing Office shall make the necessary preparations for the venue. The Implementing Office will present the result of their EIA study to the stakeholders/affected communities in the public consultation/hearing. The Implementing Office will prepare a tabulated Response Report containing the manner in which issues will be considered / have been considered in the EIA Report process or can be resolved through other means. For project-affected families (PAFs), disclosure of the Entitlement Matrix based on the provisions of RA 10752 and the LARRIP will be done for PAFs to know their benefits and entitlements

A Public Hearing may be called due to mounting opposition, held at the earliest on the 23rd calendar day from the 1st day of publication of Notice of Public Hearing using the template in **Annex 5-23** (RPM Annex 2-26) done once a week for 2 consecutive weeks, with the PH held at least 15 days from the date of publication. Refer to a Pro-forma Public Hearing Program in **Annex 5-24** (RPM Annex 2-27), with supplementing criteria/guidelines on the conduct of public hearings/consultations.

DPWH will submit in 15 days AI responses which must include response to issues raised by the stakeholders and EIARC during the site visit, public hearing or consultation. Inability to submit within the timeframe would be a ground to stop the review process and return of the EIS but with a chance for resubmission of the EIS within one (1) year without payment of processing and other fees. The ECC may be drafted in the last EIARC meeting with the Implementing Office for discussion.

The EIARC Chair will submit the EIARC within five (5) days from the last EIARC meeting. The CH will prepare the Review Process Report (RPR)/Recommendation Document, submit it to the EIAMD Review Section Chief/EIAM Division Chief who shall endorse the recommendations to the EMB Director for the final decision.

5.2.3.8 Endorsement and Decision Making

For a favorable review and endorsement DPWH shall submit to the EMB one (1) hard copy and 2 e-files of the FINAL EIA REPORT, integrating all AIs, signs the Sworn Statement of Full Responsibility on ECC Conditions prior to the official release of the ECC. EMB transmits copies of the ECC to concerned GAs and LGUs with mandate on the project for integration of recommendations into their decision-making process.

DAO 03-30 states that if no decision is made within the specified timeframe, the ECC application is deemed automatically approved, and the approving authority shall issue the ECC within five (5) working days after the prescribed processing timeframe has lapsed.

5.2.3.9 Distribution of EIS to Stakeholders

The Implementing Office in coordination with the CH, shall be responsible in ensuring the EIS is distributed to concerned stakeholders.



5.3 Post-ECC-Issuance Requirements

5.3.1 Formation and Operationalization of MMT

For Category A projects, the Implementing Office shall coordinate with EMB regarding the formation and operationalization of the MMT, in accordance the Article IV (Public Participation in Monitoring Impact of Projects with ECC) or Sections 15 to 19 of DAO 2017-15 for the Guidelines on Public Participation under the Philippine Environmental Impact Statement (EIS) System. This is supplemented by Section IV.A. of DENR DAO 2018-18 pertaining to the participation PENRO and CENRO. **Box 5-5** shows the provisions for the rationale, membership, function, Memorandum of Agreement (MOA), Environmental Monitoring Fund (EMF), and operationalization with Manual of Operations (MOO).

MMT Templates. Here are the templates used for MMT

Annex 5-25. The pro-forma MOA (RPM Annex 3-4).

Annex 5-26. Guidelines on EMF is shown in **Annex 5-26** (RPM Annex 3-5).

Annex 5-27. Template for Manual of Operations (MOO) ¹³ MMT shall prepare and submit its report to EMB-CO and EMB-RO concerned using, at least semi-annually not later than July 30 for the first semester report and January 30 for the 2nd semester report.

Annex 5-28. Compliance Monitoring and Validation Report (CMVR) (RPM Annex 3-2)

DPWH-DENR MOA. A variance on that requirement pertains to the MOA of DPWH and EMB on 10 March 1999 on Streamlining the Procedure for Processing of Application for an Environmental Compliance Certificate for Infrastructure Projects (**Annex 5-29**). Under Article III Rights and Obligations of the DPWH, Item 12, the MMT will be formed under a Bahamian Approach, that there is no EMF to be allotted and the expenses will be charged to the respective offices of the members.

"The Multi Monitoring Team (MMT) will be formed through Bayanihan Approach, since there are no funds available for Environmental Monitoring Fund (EMF). The MMT will be formed on a voluntary basis (bayanihan) with members coming from the EIAPO, Planning Service, EIARO (DPWH Regional Offices), CENRO, PENRO, Local Government Units (LGU), Non-Government Units (NGO), PO's experts and other cause-oriented environmental groups. In this regard, expenses of members of MMT in the performance of their official duties will be charged to appropriate funds of their respective offices."

¹³ Source: http://eia.emb.gov.ph/wp-content/uploads/2017/06/Template__Manual-of-Operations-MOO.docx



Box 5-5. Extracts from DAO 2017-15 on Public Participation and DAO 2018-18

DAO 2017-15

Section 15. Overview of Public Participation in the Monitoring of Impacts of Projects with ECC

The vigilance of the public especially stakeholders living or working near the project site shall be used as tool in effectively monitoring and managing environmental impacts of projects.

15.1 The Public especially the stakeholders shall be encouraged participate in the monitoring of environmental impacts by visiting the EMB Website for relevant information about projects that are being implemented in their respective areas including monitoring reports and providing relevant feedback. Among the information that shall be made available through the EMB Website are the following:

- Updated status of proponent's compliance with the requirement to submit CMR
- The latest MMT report as described in Section 16
- Updated EMP, as needed
- Amendments, if any
- Cancellation, if any

Online feedback mechanisms shall be instituted.

15.2 For ECPs, the Multi-partite Monitoring Teams (MMTs) shall continue to serve as a venue for promoting greater stakeholder vigilance and providing appropriate check and balance mechanisms in monitoring project impacts as well as a venue for empowering the communities in taking responsibility for environmental protection, as a third-party entity.

15.3 The EMB shall conduct periodic monitoring of the proponent's compliance with the ECC and other commitments and requirements of projects under the Philippine EIS System based on the environmental risk-based prioritization scheme. Projects that were issued ECCs but are no longer covered based on the existing guidelines shall be relieved from ECC commitments and shall no longer be monitored by EMB.

15.4 MMTs for ECP whose significant environmental impacts do not persist after construction phase or whose impacts could be regulated through the regular monitoring activities conducted by other government agencies, shall be terminated upon certification of completion by the lead government agency (e.g., roads, reclamation, etc.). The EMB RO shall transmit to the relevant agency/ies this information along with remaining environmental concerns for integration into their monitoring and inspection activities.

Section 16. Rationalization of the Multi-Partite Monitoring Team (MMT) Existence, Composition and Leadership

To address issues that have been raised through the years and to enhance the participatory feature of the MMT System, the following changes shall be implemented:

16.1 MMTs shall only be for ECPs. All other MMTs including clustered MMTs shall be deemed automatically dissolved. ECC condition on the creation of MMTs for Non-ECPs shall be deemed invalid.

16.2 The Implementing Offices and EMB-DENR shall no longer be member of the MMT. The EMB-DENR shall provide oversight guidance to the MMT and consider its reports and recommendations in its impact and compliance evaluation. It shall conduct regular



- performance audit of the MMTs. The Implementing Office shall provide funds for the MMT activities based on the Annual Work and Financial approved by the EMB.
- 16.3 The composition of the MMT shall be rationalized to be representative of relevant stakeholders groups as identified based on Section 10. For it to be a truly independent third-party entity, the following shall compose the reconstituted MMT:
- a. The LGU representatives
 - 1 Representative each from the Municipal/City Environment and Natural Resources Officer (MENRO/City ENRO) (for projects whose DIA is limited to the City or Municipality) and Provincial Government (PG) ENRO (for projects whose DIA covers more than 2 municipalities). In cases where there is no PG-ENRO, MENRO/City ENRO, the Municipal/Provincial Planning and Development Officer (MPDO/PPDO) or the chairman of the environment committee of the Sangguniang Bayan may be designated as representative to the MMT.
 - the Rural Health Unit (RHU) Chief and
 - concerned Barangay Captain
- All existing LGU representatives to the MMT shall be replaced by these officers or their representatives.
- b. 1 representative from the LOU-accredited local NGOs with mission/s specifically related to environmental management and/or to the type and impacts of the proposed undertaking/project may be designated as representative to the MMT. In cases, where there is no such NGOs, it shall be open to other NGOs.
 - c. Maximum of 2 representatives from Locally recognized community leaders who can represent vulnerable sectors including indigenous populations, women and senior citizens and representatives from the academe may be included as member of the MMT in addition to the LOU-accredited NGO
 - d. Maximum of 3 representatives from government agencies with related mandate on the type of project and its impacts during project implementation shall be included in the MMT membership, if not yet included. Examples of these government agencies are DOE for Energy Projects, MGB for Mining Projects, and PCG, BFAR, BMB or FMB, depending on the location. DENR participation/ membership shall be limited only in cases where there are specific concerns related function related to biodiversity and forestry as endorsed by the concerned Bureau Director.
- The MMT shall not exceed ten (10) members except in cases where the location of project facilities covers more than one (1) Barangay. In such cases, the additional member shall come from the additional Barangay/s and MENRO.
- 16.4 As a general rule, the representative from the MENRO/City ENRO, the PG-ENRO or the representative from the lead government agency (e.g., DOE for energy projects, DOT for Tourism Projects) shall serve as the MMT Chair. In cases where the said representatives do not accept the chairmanship, the members of the MMT elect among themselves and specify the procedures in its Manual of Operations (MOO).
- 16.5 The existing MMTs for ECPs shall reconstitute themselves accordingly. A Memorandum of Agreement (MOA) between the EMB-CO and Proponent shall be executed with conformity by the members identified based on Section 16.3 of this Order. Appropriate EGF provisions shall be integrated into the new MOA with the EMB CO Director as Chairperson of the EGF Committee. The pro-forma MOA shall be provided by EMB and shall be executed within one (1) year, otherwise, these MMTs shall be deemed automatically dissolved until such time that such requirement is submitted.



- 16.6 In the case of existing MMTs for Mining Projects, the EMB representatives shall likewise be removed as member of the MMT. The MMT shall regularly submit to EMB CMVR format report including report on compliance with the EPEP (based on EMB-approved EMP) and the EMB shall similarly conduct its monitoring activities independent of the MMT.

Section 17. Functions of the Multi-Partite Monitoring Team (MMT)

As an independent entity whose membership represents the stakeholders I public, the MMT is expected to add credibility by being open and transparent in monitoring environmental impacts and compliance with the Philippine EIS System requirements. The MMT shall have the following specific functions:

- a) Conduct quarterly ocular site visit to validate the proponent's compliance with the ECC conditions and the Environmental Management and Monitoring Plan including the requirement to conduct self-monitoring and submit corresponding reports regularly.

The MMT may observe sampling activities conducted by the Implementing Office.

- b. Prepare and submit its report to EMB-CO and EMB-RO concerned using EMB-prescribed format at least semi-annually not later than July 30 for the first semester report and January 30 for the 2nd semester report [CMVR]
- c. Institute an environmental emergency and complaints receiving and management mechanism which shall include systems for transmitting recommendations for necessary regulatory action to EMB in a timely manner to prevent adverse environmental impacts.

Section 18. MMT Formation and Operationalization

- 18.1 After the issuance of ECC for ECPs, the Implementing Office shall initiate the formation of the MMT based on the above policy updates in compliance to the relevant ECC condition. A Memorandum of Agreement (MOA) between EMB-CO and PROPONENT based on pro-forma to be provided by EMB shall be executed with conformity of members of the MMT as identified based on Section 15.3 of this Order. The MOA signed by the proponent and the new members the Implementing Office shall submitted to EMB CO for final approval within the deadline specified in the ECC.

- 18.2 A MMT Manual of Operations (MOO) shall be formulated / updated based on these policy updates. The MOO shall guide the MMT in planning its activities, operationalizing its functions and managing its performance. It should contain at least the following:

- Membership: selection process, code of ethics, suspension/ removal, resignation/replacement process
- Organization: structure, leadership, roles & responsibilities
- Fund Administration & Management
- Activities: meetings, monitoring activities, records keeping, public disclosure, operations & performance enhancement

An MMT without an updated MOO submitted within a year from the signing of the MOA by DENR shall be suspended until such time that the requirement is submitted and approved.

- 18.3 In the conduct of its quarterly site visit, the MMTs shall implement the usual procedures including a closing meeting where the MMT findings shall be discussed with the representative of the Implementing Office.



18.4 MMTs who do not submit the required reports, those who fail to submit its report before the deadlines or submits incomplete reports for one (1) year shall be suspended until such time that such requirements are complied with.

18.5 Individual MMT Members who violate the code of ethics shall be subject to suspension/removal/replacement by the chairman of MMT or any other disciplinary action as indicated in the MOO.

18.6 All other existing guidelines consistent with the provisions of this DAO shall still be in effect.

Section 19. Environmental Monitoring Fund (EMF)

19.1 The Proponent shall provide funds for the EMF, the amount of which shall be based on the annual work and financial plan (AWFP) to be approved by the EMB-CO. All EMFs established without an MMT shall be returned to the Implementing Office. No new EMFs shall be established without an MMT.

19.2 The EMF administration and management shall be prescribed in the MOO and should contain at the minimum, the following provisions:

- Eligible Expenses and Standards
- Preparation & Approval of Work and Financial Plan for the establishment of the amount of EMF
- Management of Fund
- Disbursement and Auditing Procedures

19.3 The mode of fund administration shall be decided upon by the Implementing Office in consultation with the MMT and should consider the MMT's independence. The Fund Administrator shall accept the fund administration and management responsibilities as reflected in the MOO and shall be liable for any misapplication or inappropriate disbursements allowed to be charged against the EMF.

19.4 The Fund Administrator shall open an account with a government accredited bank, with the elected Chairperson or Treasurer of the MMT as signatory AND the representative of the Fund Administrator as counter signatory.

19.5 The Proponent shall release the amount of funds based on the EMB-approved AWFP initially, equivalent to the projected expenses for the first three quarters and succeeding releases shall be done semi-annually upon liquidating expenses and validating submission of the MMT Report to EMB for the previous reporting period. The proponent shall conduct regular audit of the EMF and apprise EMB on irregularities, if any.

19.6 MMT members especially those who will lose their opportunity to earn while participating in MMT activities shall receive an honoraria of not more than PhP 2000.00 per quarter for their participation charged to the EMF. A contingency of not more than 50% of the total amount allotted for the honoraria and for logistical expenses for regular activities may be allotted emergency meetings, capability building and other related activities.

DENR DAO 2018-18 Section IV.A

1. The PENRO and CENRO shall participate in the Multipartite Monitoring Team (MMT) formed pursuant to Section 9.1, Article II of DAO 2003-30 which is tasked to undertake monitoring of compliance with ECC Conditions.



5.3.2 On-line Submission of Compliance Monitoring Report (CMR)

The Implementing Office shall prepare submit semiannually a Compliance Monitoring Report (CMR) regarding the ECC conditions and commitments in the Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP) in the EIS. A CMR form is presented in **Annex 5-30** (RPM Annex 3.1). The submission date shall be coordinated with EMB Region. The online submission can be referred to <https://online.emb.gov.ph/cmr/>. This requires prior online registration of account at <https://client.emb.gov.ph/crs/login>. **Annex 5-53** shows the sample CMR with filled up components from EMB 8.

5.3.3 On-line Submission of Quarterly Self-Monitoring Report (SMR)

Overview. Through the issuance of an ECC, EMD may require the Implementing Office of a proposed construction project to designate a Pollution Control Officer, who shall submit a notarized Quarterly Self-Monitoring Report (SMR) and comply with the requirements under intent of DAO 2003-27 and its EMC 2003-008 or the Procedural and Reference Manual.

Below is the list of the related issuances for guidance:

EMC 2003-008	Procedural and Reference Manual for DAO 2003-27
DAO 2003-27	Amending DAO 26, DAO 29 and DAO 2000-81 among others on the Preparation and Submission of Self-Monitoring Report (SMR)
DAO 1992-26	Amending Memorandum Circular No. 02 Series Of 1981: Appointment/Designation of Pollution Control Officers
LOI 588 (1977)	[Appointment and/or Designation of Pollution Control Officer in All local government, development authorities, government-owned or controlled corporations, industrial, commercial and manufacturing establishments, and all other private entities, whose functions involve the discharge or emission of pollutants into the water, air and/or land resources, or the operation, installation or construction of any anti-pollution device, treatment work or facility, sewerage or sewage disposal system]

Requirement. The requirement is the submission of the SMR to EMB Regional Office.

Annex 5-31 shows the format of the SMR

Annex 5-32 shows the use manual for the online submission of the SMR.¹⁴

¹⁴ The submission of SMR is now online via <https://client.emb.gov.ph/smr/login> (previously <https://iis.emb.gov.ph/crs>), with prior creation of an account at <https://client.emb.gov.ph/crs/register>. The user manual is downloadable from <https://client.emb.gov.ph/smr/uploads/STEPS%20ON%20HOW%20TO%20USE%20SELF%20MONITORING%20REPORT%20SYSTEM%20CLIENT%20SIDE.pdf>



Annex 5-53 shows the sample SMR with filled up components from EMB 7

5.4 PAMB Clearance

Overview. The Implementing Office shall obtain for DENR Regional Office PAMB clearance after preparation of an IEE or EIS as requirement prior to the issuance of ECC in case the proposed project is located in a Protected Area. That requirement is pursuant to the following issuances:

1. RA 11038 (2018) Expanded National Integrated Protected Areas System Act of 2018

Section 11. Section 12 of Republic Act No. 7586 is hereby amended to read as follows:

"Sec. 12. Environmental Impact Assessment (EIA). Considering that protected areas are environmentally critical areas, the proponent of development projects and activities with potentially significant adverse impacts as determined by the Environmental Management Bureaus (EMB), whether or not these projects or activities are included in the management plan, shall secure an Environmental Compliance Certificate (ECC) in accordance with the Philippine Environment Impact Statement (EIS) System: Provided, That for development projects and activities that are not environmentally critical, an initial environmental examination (IEE) shall be undertaken instead of a full-blown EIA. No project or activity may be undertaken by any Project Proponent without prior clearance from the PAMB. The DENR shall require the submission of the PAMB clearance, among others, before issuing an ECC to Project Proponent.

"No actual implementation of such activities shall be allowed without the required ECC under the Philippine EIA System. Violations of environmental laws, rules and regulations, including those under the EIA System, shall be penalized accordingly."

2. DAO 2008-26 Revised Implementing Rules and Regulations of Republic Act No. 7586 or the National Integrated Protected Areas System (NIPAS) Act of 1992

Rule 13. Environmental Impact Assessment - Considering the protected areas are Environmentally Critical Areas (ECA), the proponent of development projects and activities with potential environmental damage as determined by the Environmental Management Bureau, whether or not included in the Management Plan, shall secure an Environmental Compliance Certificate (ECC) in accordance with the Philippine Environment Impact Statement (EIS) System. Provided, that for development project and activity within the Management Plan, an Initial Environmental Examination (IEE) can be undertaken instead of a full-blown Environmental Impact Assessment (EIA)

- 13.1 The proponent of development project and activity shall secure prior clearance from the PAMB before undertaking or implementing the activity and before the issuance of an ECC.



- 13.2 Violations of environmental laws, rules and regulations, including those under the EIA System, shall be penalized accordingly.

Documentary Requirements. The Implementing Office shall obtain guidance with DENR CENRO on the documentary requirements and process which may vary among PAMBs and projects. For the DENR-CAR Region there are only two documents to submit.¹⁵

1. Letter Request for PAMB Clearance, and,
2. Project Proposal/Feasibility Study

Procedure.

For DENR-CAR Regional Office the lead unit in attending unit for PAMB Clearance is Protected Area Management and Biodiversity Conservation Section of the Conservation and Development Division. There is no application fee required.

Client Steps	Agency Action	Responsible Agency Person	Processing Time
1. Submission of project proposal/feasibility study and letter request for PAMB clearance by the proponent to DENR Receiving Clerk	Receives, checks the completeness of submitted requirements, stamps the date and time on documents and refers to RED for evaluation	Receiving/Releasing Clerk Office of the Regional Executive Director	5 mins.
	Evaluates and refers to ARD-TS for evaluation and appropriate action	Regional Executive Director	2 hrs.
	Records and forwards document to ARD-TS	Receiving/Releasing Clerk Office of the Regional Executive Director	5 mins.
	Receives and records the document. Refers the document to ARD- TS for evaluation	Receiving/Releasing Clerk Office of the Assistant Regional Director for Technical Services	5 mins.
	Evaluates and refers to CDD for evaluation and appropriate action	Assistant Regional Director for Technical Services	2 hrs.

¹⁵ Source: <https://car.denr.gov.ph/images/R-CAR/Citizens-Charter-CAR2020.pdf>



Client Steps	Agency Action	Responsible Agency Person	Processing Time
	Forwards the request to CDD Chief	Receiving/Releasing Clerk Office of the Assistant Regional Director for Technical Services	2 mins
	Receives, records, and forwards the document to the CDD Chief	Receiving/Releasing Clerk Conservation and Development Division	5 mins.
	Evaluates the document and forwards to PAMBCS for appropriate action	Chief, Conservation and Development Division	2 hrs.
	Reviews document and instructs PAMBCS staff to prepare memo for concerned Protected Area Superintendent (PASu) to include in next PAMB Meeting's agenda	Section Chief, PAMBCS	2 hrs.
	Receives and records the memo and attached documents (Letter request, Project Proposal/ Feasibility Study)	Receiving/Releasing Clerk Conservation and Development Division	5 mins
	Reviews and puts his initial on the memo	Chief, Conservation and Development Division	15 mins.
	Forwards the memo and attached documents to ARD-TS	Receiving/Releasing Clerk Conservation and Development Division	2 mins.
	Receives and records the document	Receiving/Releasing Clerk Office of the Assistant Regional Director for Technical Services	5 mins.
	Reviews the memo and attached document (Letter request, Project Proposal/ Feasibility Study) and endorses to RED's office for his approval	Assistant Regional Director for Technical Services	15 mins.
	Forwards the memo and attached document to RED's office	Receiving/Releasing Clerk Office of the Assistant Regional Director for Technical Services	2 mins.



Client Steps	Agency Action	Responsible Agency Person	Processing Time
	Receives, records and forwards to the Office of the RED for his approval	Receiving/Releasing Clerk Office of the Regional Executive Director	5 mins.
	Evaluates attached documents and signs memo	Regional Executive Director	2 hrs.
	Forwards the memo and documents to PENRO	Receiving/Releasing Clerk Office of the Regional Executive Director	5 mins.
	Evaluates and reviews the memo and attached documents and forward to CENRO	Concerned PENRO	2 days
	Evaluates and reviews the memo and attached documents and forwards it to PASu	Concerned CENRO	2 days
	Evaluates and reviews the memo and attached documents for inclusion in agenda of the next scheduled PAMB Meeting	Concerned PASu	2 days
2. Presentation of the Project Proposal/ Feasibility Study	Contacts the proponent for the scheduled presentation of the Project Proposal/ Feasibility Study during the PAMB meeting	Concerned PASu	5 mins
	PASu Prepares PAMB Minutes of Meeting with attached Resolution/s and endorses it to RED	Concerned PASu	3 days
	Receives and checks the completeness of submitted PAMB Minutes of Meeting and PAMB Resolution/s, stamps the date and time on documents and refers to RED for evaluation	Receiving/Releasing Clerk Office of the Regional Executive Director	5 mins.
	Evaluates and refers to ARD-TS for evaluation and appropriate action	Regional Executive Director	2 hrs.



Client Steps	Agency Action	Responsible Agency Person	Processing Time
	Records and forwards document to ARD-TS	Receiving/Releasing Clerk Office of the Regional Executive Director	5 mins.
	Receives and records the document. Refers the document to ARD- TS for evaluation	Receiving/Releasing Clerk Office of the Assistant Regional Director for Technical Services	5 mins.
	Evaluates and refers to CDD for evaluation and appropriate action	Assistant Regional Director for Technical Services	2 hrs.
	Forwards the documents (PAMB Minutes of Meeting and PAMB Resolutions) to CDD Chief	Receiving/Releasing Clerk Office of the Assistant Regional Director for Technical Services	2 mins.
	Receives, records, and forwards the document to the CDD Chief	Receiving/Releasing Clerk Conservation and Development Division	5 mins.
	Evaluates the document and forwards to PAMBCS for appropriate action	Chief, Conservation and Development Division	2 hrs.
	Reviews document and instructs PAMBCS staff to prepare memo for RED's approval of the PAMB minutes of meeting and resolution/s	Section Chief, PAMBCS	2 hrs.
	Receives, records, and forwards the document to the CDD Chief	Receiving/Releasing Clerk Conservation and Development Division	5 mins.
	Reviews and signs memo	Chief, Conservation and Development Division	5 mins.
	Forwards the memo and attached documents to ARD-TS	Receiving/Releasing Clerk Conservation and Development Division	2 mins.
	Receives and records the document	Receiving/Releasing Clerk Office of the Assistant Regional Director for Technical Services	5 mins.



Client Steps	Agency Action	Responsible Agency Person	Processing Time
	Reviews the memo and attached document (PAMB Minutes of Meeting and PAMB Resolution/s), puts his initial on memo, and endorses to RED's office for his approval	Assistant Regional Director for Technical Services	15 mins.
	Forwards the memo and attached document to RED's office	Receiving/Releasing Clerk Office of the Assistant Regional Director for Technical Services	2 mins.
	Receives, records and forwards to the Office of the RED for his approval	Receiving/Releasing Clerk Office of the Regional Executive Director	5 mins.
	Evaluates attached documents (PAMB Minutes of Meeting and PAMB Resolution/s) and signs memo	Regional Executive Director	2 hrs.
	Forwards the signed documents (PAMB Minutes of Meeting and PAMB Resolution/s) to ARED, Technical Services	Receiving/Releasing Clerk Office of the Regional Executive Director	5 mins.
	Receives and records the document	Receiving/Releasing Clerk Office of the Assistant Regional Director for Technical Services	5 mins.
	Evaluates and refers to CDD for appropriate action	Assistant Regional Director for Technical Services	5 min.
	Receives, records, and forwards the document to the CDD Chief	Receiving/Releasing Clerk Conservation and Development Division	5 mins.
	Evaluates the document and forwards to PAMBCS for appropriate action	Chief, Conservation and Development Division	2 hrs.



Client Steps	Agency Action	Responsible Agency Person	Processing Time
	Reviews document and instructs PAMBCS staff to forward the signed PAMB Minutes of Meeting and PAMB Resolutions to PASu	Section Chief, PAMBCS	2 hrs.
3. Receives notice from the PASu	Contacts the proponent for the copy of the signed PAMB Resolution	Concerned PASu	5 mins.
TOTAL:		<i>11 days, 47 mins</i>	



5.5 NCIP FPIC/MOA/Certification Precondition

Overview. When the proposed infrastructure project will be unavoidably located in an ancestral domain, the Implementing Office, with the assistance of the Safeguards Group (DEO Focal Person), shall include in the Environmental Work Program, during the Project Identification Phase, the requirements of NCIP pursuant to RA 8371 Indigenous Peoples Rights Act of 1997 and its implementing rules and regulations. These are the FPIC, MOA, and Certification Precondition. Certification Precondition (CP) refers to the Certificate issued by the NCIP, signed by the Chairperson, attesting to the grant of FPIC by the concerned ICCs/IPs after appropriate compliance with the requirements provided for in this Guidelines.

Section 7 of RA 8371 pertaining to rights in the ancestral domains, as follows:

- a. Rights of Ownership
- b. Right to Develop Lands and Natural Resources
- c. Right to Stay in the Territories
- d. Right in Case of Displacement.
- e. Right to Regulate Entry of Migrants.
- f. Right to Safe and Clean Air and Water.
- g. Right to Claim Parts of Reservations.
- h. Right to Resolve Conflict

Among the implementing rules and regulations is the NCIP Administrative Order (AO) No. 3 Series of 2012 or the Revised on Free and Prior Informed Consent (FPIC) and Related Processes of 2012. NCIP AO 2012-03 has seven objectives and Number 1 is to "ensure genuine exercise by Indigenous Cultural Communities/Indigenous Peoples (ICCs/IPs) of their right to Free and Prior Informed Consent (FPIC), whenever applicable".

Documentary Requirements. The Implementing Office shall coordinate with NCIP Regional through an official letter and courtesy visit to inform the office and consult on the operational requirements.

Process. The activities are outlined as follows:

1. Determination of the lead NCIP Regional Office. The NCIP Regional Director shall determine if the proposed project is solely under the jurisdiction of the region, if there is another, the matter will be referred to the Ancestral Domain Office which will decide on which region will lead. (Section 6)
2. Formation of a Field-Based Investigation (FBI) Team through a memorandum of the NCIP Regional Director (Section 8). Field-Based Investigation (FBI). It refers to the ground investigation undertaken to determine whether or not the plan, program, project or activity overlaps with, or affects, an ancestral domain, the extent of the affected area, and the ICCs/IPs whose FPIC is to be obtained.
3. Pre-FBI Conference; Matters to be Taken (**Section 10**)
 - a. Orientation on the requirements of the FBI process.



- b. The identity and other basic information about the applicant.
 - c. Detailed project profile.
 - d. Work and Financial Plan; and
 - e. Other important matters that may be agreed upon.
4. Agreement on the Work and Financial Plan (WFP) for FBI/FPIC. (Section 12)
5. Commencement and Conduct of the FBI (Section 13)
6. FBI Reporting (Section 14)
7. Formation of FPIC Team by the NCIP Regional Director (Section 16)
8. Conduct of Pre-FPIC Conference (Section 21)
9. Conduct of two community assemblies for the Consent with Drafting of MOA (Section 22)
10. Posting of Bond (Section 23)
11. FPIC Team Submission of Report to the NCIP Regional Director (Section 28)
12. The Regional Review Team (RRT) review the FPIC Report and MOA (Section 28)
13. Legal Review of the MOA (Section 35)
14. Issuance of Certification Precondition

5.6 NCIP Certificate of Non-Overlap

Overview. During the project definition phase or prior to the conduct of Feasibility Study, the Implementing Office shall obtain a Certificate of Non-overlap (CNO) from the NCIP Regional Director when a proposed project is outside but near an Ancestral Domain, or as deemed important as supporting document in for ECC or CNC applications.

Documentary Requirement. The documents are the request letter and clear location map of the proposed project. The request letter shall contain an undertaking for the conduct of FPIC should it be discovered later that there is, in fact, an overlap with an AD.

Process.

1. The Implementing Office sends the request letter to NCIP Regional Director
2. NCIP Regional Director acts on the request and sends a reply

The CNO will have a concurrence of the concerned NCIP Commissioner. Under Section 15 of NCIPAO 2021-03 requires applicant to execute an undertaking for the conduct of FPIC should it be discovered later that there is, in fact, an overlap with an AD, provided further, that special attention shall be given to ICCs/IPs who are shifting cultivators or traditionally nomadic so as not to prejudice their rights as such.



5.7 Special Land Use Permit (SLUP)

Overview. The Implementing Office shall apply Special Land Use Permit (SLUP) with the DENR-CENRO which has jurisdiction over the area when a proposed infrastructure project located in a public forest pursuant to DAO 2004-59 or the Rules and Regulations Governing the Special Uses of Forestlands, issued on 31 August 2004.

Documentary Requirements. The following is the list of documentary requirements to be submitted:¹⁶

1. Duly accomplished Application Form
2. Application Fee
3. Map of the applied area; including the technical description, longitude and latitude coordinates, and tie point from the nearest landmark
4. Pertinent documents showing proof that the applicant is a legitimate entity qualified to be a holder of a forestland Tenurial Instrument or Agreement
5. For an individual applicant, certified copy of Birth Certificate or, certified copy of Certificate of Naturalization
6. For an association, corporation, cooperative or partnership; certified copy of Securities & Exchange Commission (SEC) Registration Certificate, Articles of Incorporation/Partnership, and Resolution of the corporate governing body (Board of Directors, Board of Trustees, etc.) designating the authorized representative of said corporation, association or partnership to apply/sign documents for and on behalf of the company
7. For cooperative, certified copy of Certificate of Registration with the Cooperative Development Authority (CDA)
8. Environmental Compliance Certificate (ECC), issued by the Environmental Management Bureau of DENR
9. Appropriate clearance from the National Commission on Indigenous Peoples (NCIP)
10. Clearance from Palawan Council for Sustainable Development (PCSD), if the applied area is located in the province of Palawan
11. Proof of Financial Capability to develop and manage the applied area
12. Endorsement from the concerned CENRO, PENRO and RED of DENR
13. Performance bond twice the annual rental of user's fee as the case maybe, but not less than P10,000. Provided that 50% of the computed bond deposit may be posted in CASH and a balance in the form of surety with a duration of (3) three years
14. Annual rental shall be paid before the issuance of the permit and the performance bond shall be posted simultaneously

The following Annexes are provided:

¹⁶ Source: DENR: <https://www.denr.gov.ph/index.php/products-services/frontline-services/forest-management?id=346>, and FMB: <https://forestry.denr.gov.ph/index.php/fmb-product-and-services/special-land-use-permit-agreement>, accessed on July 23, 2021



- Annex 5-33.** A Checklist of Requirements Form;¹⁷
Annex 5-34. Application Form;¹⁸ and
Annex 5-35. Outline of Indicative Management Plan

The application shall be submitted to DENR-CENRO for the initial processing with the following levels of approvals, and actions presented in **Table 5-1** and **Figure 5-1**.

Table 5-1: Levels of Authority in Approval of SLUP

DENR Office	Level of Approval for SLUP
CENRO	less than one hectare
PENRO	one hectare to 5 hectare
RED	more than one hectare to 99 hectares
DENR Secretary	100 hectares and above

Procedure.

Party	Activity	Duration, day
Applicant	Files application to the CENRO	
	Pay application and other fees	
	Receives permit/lease	
CENRO	Accepts and reviews applications and checks completeness of requirements	2/24
	Conducts field investigation (area-coverage-dependent duration)	1-3
	Prepares map after completion of field work	2
	Issues Special Land Use Permit for areas less than one (1) hectare	2-3
	Endorses application to PENRO for areas one (1) hectare or more or those SLUP which involve tree cutting such as Road Right-of-Way	
	Endorses Special Land Use Permit which involved tree cutting	2-3
PENRO	Reviews and evaluates application together with the report of CENRO	1
	Issues Special Land Use Permit for areas 1 hectare to 5 hectares	2
	Endorses applications to RED for areas more than 5 hectares or those SLUP which involve tree cutting such as Road Right-of-Way	1-2
	Endorses Special Land Use Application which involved tree cutting	2-3
RED	Reviews application and field report	1
	Validates report if necessary	1-2
	Issues Special Land Use Permit for areas more than 5 hectares to 99 hectares	2
	Endorses application and field reports to the OSEC covering 100 hectares and above or those SLUP which involve tree cutting such as Road Right-of-Way	1-2
	Endorses Special Land Use Application which involved tree cutting	2-3
FMB	Reviews application and supporting documents	1

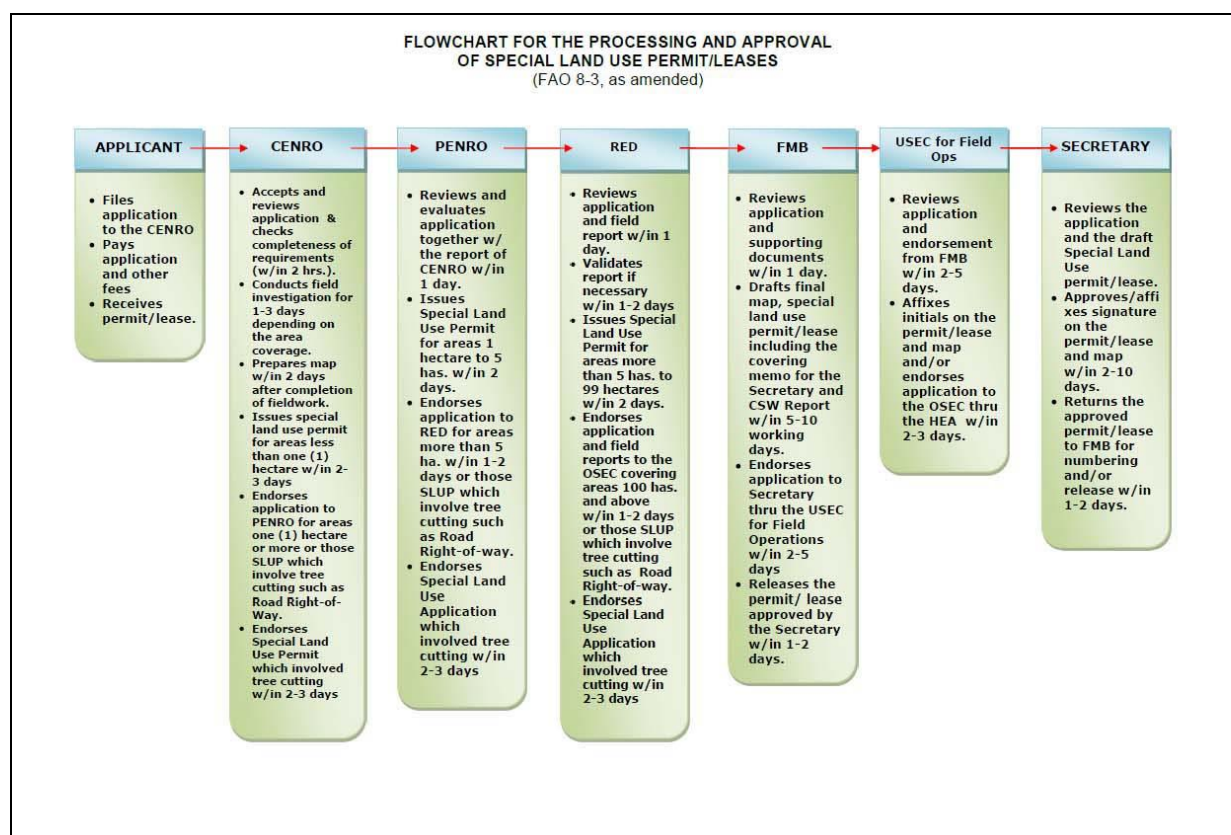
¹⁷ Source: FMB: <https://forestry.denr.gov.ph/index.php/fmb-product-and-services/special-land-use-permit-agreement>, accessed on July 23, 2021.

¹⁸ Source: <https://www.evoss.ph/Home/Download/4256>



	Drafts final map, Special Land Use Permit/Lease including the covering memo for the Secretary and CSW Report	5-10
	Endorses application to Secretary thru the USEC for Field Operations	2-5
	Releases the permit/lease approved by the Secretary	1-2
USEC for Field Operations	Reviews application and endorsement from FMB	2-5
	Affixes initials on the permit/lease and map and/or endorses application to the OSEC thru the HEA	2-3
Secretary	Reviews the application and the draft Special Land Use Permit/Lease	-
	Approves/affixes signature on the permit/lease and map	2-10
	Returns the approved permit/lease to FMB for numbering and/or release	1-2

Figure 5-1: Flowchart of the Processing and Approval of Special Land Use Permit / Leases



Source: <https://forestry.denr.gov.ph/index.php/fmb-product-and-services/special-land-use-permit-agreement>, accessed on 23 July 2021

5.8 Forest Land Use Agreement for Tourism Purposes (FLAgT)

Overview. The Implementing Office shall apply for a Forest Land Use Agreement for Tourism Purposed (FLAgT) for an infrastructure project intended for tourism in a forest area required under DAO 2004-28 or the Rules and Regulations Governing the Use of Forestlands for Tourism Purposes, issued on 25 August 2004.

FLAgT is a contract between the DENR and a natural or juridical person, authorizing the latter to occupy, manage and develop, subjects to government share, any forestland of the public domain for tourism purposes and to undertake any authorized activity therein for a period of 25 years and renewable for



the same period upon mutual agreement by both parties. It shall include special forest land uses such as Bathing Establishment, Camp Site, Ecotourism Destination, Hotel Site (inclusive of related resort facilities) and Other Tourism Purposes.

Documentary Requirements. See **Annex 3-66**¹⁹ for the list of requirements. The initial requirements in the DENR webpage²⁰ include the following

1. Duly accomplished Application Form (See **Annex 3-37**)
2. Application Fee
3. Map of the applied area; including the technical description, longitude and latitude coordinates, and tie point from the nearest landmark
4. Pertinent documents showing proof that the applicant is a legitimate entity qualified to be a holder of a forestland Tenurial Instrument or Agreement
5. For an individual applicant, certified copy of Birth Certificate or, certified copy of Certificate of Naturalization
6. For an association, corporation, cooperative or partnership; certified copy of Securities & Exchange Commission (SEC) Registration Certificate, Articles of Incorporation/Partnership, and Resolution of the corporate governing body (Board of Directors, Board of Trustees, etc.) designating the authorized representative of said corporation, association or partnership to apply/sign documents for and on behalf of the company
7. For cooperative, certified copy of Certificate of Registration with the Cooperative Development Authority (CDA)
8. Indicative Management Plan (See **Annex 3-38**)
9. Environmental Compliance Certificate (ECC), issued by the Environmental Management Bureau of DENR
10. Appropriate clearance from the National Commission on Indigenous Peoples (NCIP)
11. Clearance from Palawan Council for Sustainable Development (PCSD), if the applied area is located in the province of Palawan
12. BIR Certification on the zonal valuation of the nearest commercial zone of the Barangay/Municipality or Province, whichever is higher
13. Proof of Financial Capability to develop and manage the applied area
14. Endorsement from the concerned CENRO, PENRO and RED of DENR
15. Performance bond twice the annual rental of user's fee as the case maybe, but not less than P10,000. Provided that 50% of the computed bond deposit may be posted in CASH and a balance in the form of surety with a duration of (5) five years renewable every (5) years in case of a lease or management agreement coterminous to the FLAg.

Procedure. The Implementing Office shall consult the Regional DENR CENRO on the application procedure.

¹⁹ Source: FMB: <https://forestry.denr.gov.ph/index.php/fmb-product-and-services/forest-land-use-agreement-forest-land-use-agreement-for-tourism>, accessed on 23 July 2021

²⁰ Source: DENR: <https://www.denr.gov.ph/?id=334>, accessed on 23 July 2021



5.9 Foreshore Lease Agreement (FLA)

Overview. When a proposed infrastructure project or part of it is located in foreshore lands including marshy lands or lands covered with water bordering upon shores or banks of navigable lakes or rivers, the Implementing Office shall file a Foreshore Lease Agreement (FLA) with the Community Environment and Natural Resources Office (CENRO) which has jurisdiction over the area, according to the requirements stipulated in DAO 2004-04 or the Revised Rules And Regulations Governing The Administration and Management of Foreshore Lands issued 24 August 2004. The FLA is for a period of twenty-five (25) years and renewable for another twenty-five (25) years at the option of the lessor.

The Implementing Office shall consult the implementation practices in the CENRO.

Documentary Requirements. Under DAO 2004-04 the documentary requirements include the following:

1. Duly accomplished Foreshore/ Miscellaneous Lease Application (**Annex 5-40**)
 - a. If the applicant is a naturalized Filipino citizen, a copy of his certificate of naturalization duly issued by the proper agency.
 - b. In case of corporation, association or partnership.
 - i. Articles of Incorporation and Certificate of Registration from the Securities and Exchange Commission (SEC); and
 - ii. Three (3) copies of the Board Resolution authorizing the President or any representative/s to apply for foreshore lease agreement.
 - c. If the applicant uses a name, style or trade name, other than his/its true name, three (3) copies of the Certificate of Registration of such name, style or trade name from the Department of Trade and Industry (DTI) and Securities and Exchange Commission (SEC).
2. Approved plan and technical description of the land applied for.
3. Certification from the regional heads whenever applicable, of the following agencies/offices having jurisdiction over the area that the land applied for is not needed for public use:
 - a. Department of Tourism.
 - b. Philippine Ports Authority (PPA).
 - c. Municipal/District/City Engineer's Office with the concurrence of the Regional Director of the Department of Public Works and Highways (DPWH); and/or
 - d. Public Estates Authority (PEA)
4. A development plan of the area stating among others, the financial and technical capability of the applicant to undertake the project.

The application shall be accompanied by a non-refundable application fee in the amount of One Thousand (P1,000.00) pesos for corporations, associations, or partnerships; and Five Hundred (P500.00) pesos for individual plus documentary stamps.



Procedure. Here are the steps in processing of application under DAO 2004-24:

1. Filing and acceptance of application with complete requirements at the CENRO to include verification of records, numbering, foldering and recording (1 day)
2. Referral to Land Investigator/Deputy Public Land Inspector for investigation and ocular inspection (1 day).
3. Conduct of preliminary investigation and submission of report by the investigator to the CENR Officer (7 days).
4. Conduct and submission of appraisal report by the CENR Officer to the PENR Officer, Regional Executive Director (RED), or Secretary, as the case maybe (5 days).
5. Approval of appraisal and grant of authority to conduct public bidding by the following:
PENR Officer - (3 days)
Regional Executive Director (RED) - (5 days) Secretary - (10 days)
6. Publication/posting of the notice of right to lease the land applied for and submission of proofs of publication by the CENR Officer to the PENR Officer (45 days).
7. Public bidding and submission of report of bidding by the CENR Officer to the PENR Officer (2 days), [conducted in accordance with accordance with Sections 34, 35, 36 and 37 of C.A. 141].
8. Issuance of Order or Award and preparation of foreshore lease agreement by the CENR Officer (3 days).
9. Signing of agreement by the awardee and approval by the following officials concerned upon receipt of the instrument.

Officer	Level of Approval, hectares	Approval Time, Days
PENR Officer	1 hectare and below	2-5
Regional Executive Director (RED)	more than 1 hectare up to 5 hectares	7
Secretary	more than 5 hectares	15

10. Notarization and transmittal of approved foreshore lease agreement to the applicant by the CENR Officer/Record Officer concerned (1 day).

The appraisal and/or reappraisal shall follow the provisions in DAO 98-20. Reappraisal is done is every ten years from the date of the approval of the FLA or earlier in cases of introduction of new improvements/development in the area. The rental shall be paid at CENR Office having jurisdiction over the land subject of the lease, and remitted to the National Treasury

FLA Conditions. The following are prescribed in the addition to the FLA conditions:

1. The lessee shall not assign, encumber or sublet his rights of the lease without prior consent issued by the PENRO/RED/Secretary, as the case maybe.



2. Nothing in this section shall be understood or construed to permit the assignment, encumbrance or subletting of foreshore lands to persons, or associations/corporations/partnerships which are not authorized to lease such lands under C.A. 141 as amended and other pertinent laws.
3. It is strictly prohibited to remove or dispose any timber except as provided under PD 705 as amended, or any stone, oil, coal, salts, or other minerals or medicinal mineral waters existing within the leased area. Violation of these conditions by the lessee shall cause the forfeiture of his rights stipulated in the lease agreement and render him liable to immediate dispossession and suit for damages.
4. All projects introduced by the lessee shall be subject to the Environmental Impact Assessment System.
5. The lessee shall be required to pay the annual lease rental within fifteen (15) days after receipt of the approved lease contract for the first year. Thereafter, said lease rental shall be paid annually on or before the fifth day of the first month of the year during the life of the lease and without the need of notice of demand to pay.
6. The lessee shall be required to follow strictly the implementation of the approved development plan.
7. The salvage zone described herein shall not form part of the agreement. Further, the lease is subject to easement reserved by the Law on Waters and to the provisions of Sections 41, 109, 110, 111, 112, 113 and 114 of C.A. 141 as amended; and
8. The lease shall not give lessee any right to conduct any reclamation work within or adjoining the area under his lease.

FLA Cancellation. The FLA is cancelled under the following scenarios:

1. Any violation of the provisions of C.A. 141 as amended regarding Foreshore Lands and the additional conditions under the preceding section of this Order; and
2. Non-payment of annual lease rental for two (2) consecutive years.



5.10 Area Clearance for Reclamation

Overview. The Project Proponent shall apply for an Area Clearance with the DENR Regional Executive Director (ORED) should the proposed infrastructure project include an area for reclamation over portions of foreshore and submerged that are found suitable and available for reclamation and issuance of special patents, subject existing DENR rules and regulations. Foreshore is the part of the shore which is alternately covered and uncovered by the ebb and flow of the tide. Protected Areas shall not be subject to reclamation.

The Implementing shall secure guidance from the Office of the ORED on the details of application documentary requirements and procedures stipulated in DAO 2018-14 or the Guidelines on the Issuance of Area Clearance for Reclamation Projects and Proclamation/Special Patents over Reclaimed Lands issued on 20 July 2018.

Requirements. The Project Proponent prepared the documentary requirements for the application consisting of the following:

1. Project Description
 - a. Sketch Plan
 - b. Indicative site development plan to state the usage/purpose of the area including buffer zone. mini-park development, roadside tree-planting or conceptual development plant and land use plan including site of identified sources of appropriate scale indicating relative distance to project;
 - c. Description of the reclamation site - Average depth, boundaries, immediate vicinity, distance from shoreline, existing road/access/egress and ingress, available infrastructure facilities, utilities, e.g., source of power, water and telecommunications, 5-year LGU infrastructure program which will enhance viability of proposed reclamation.
 - d. Valid sources of fill materials.
 - e. Reclamation methodology - the procedure/techniques in undertaking the activity to include the estimate volume of fill materials, type of materials and sources, containment/retention wall and consolidation of materials.
 - f. Estimated cost of reclamation and land development including supporting data (i.e., existing labor force, structure and average cost and available equipment and average cost/rental rates).
 - g. Proposed funding/financing of the project.
 - h. Proposed project timetable - reclamation, land development and other related activities.
 - i. Prevailing market land values of types/uses similar to the proposed land use/s within immediate vicinity duly certified by the local assessor/s and based on Bureau of Internal Revenue (BIR) zonal valuations; and
 - j. Other documents, data and information pertinent to the proposed reclamation.



2. Certification on the status of the area and the land classification of the adjacent land by the CENRO/Implementing PENRO, or by Region in the case of DENR-NCR;
3. Geotagged photos showing the panoramic view of the land and adjoining areas, including existing landmarks and identifying features.
4. Sanggunian Resolution/s (Municipality/City, Province) authorizing the application for reclamation in case of LGU, or Board of Directors' Resolution in case of Government corporation. In case the applicant is the provincial LGU, the Sanggunian Resolution of the Municipality/City where the proposed relocation is located shall be secured, in addition to the Provincial Board Resolution:
5. Clearances from concerned government agencies such as PRA (in case applicant is other than PRA), PPA (in areas under its jurisdiction), DOT (in areas declared as tourist zones), BFAR, DOE (for submarine pipelines and power cable connection), concerned LGU (if the area is within municipal waters and the project is not LGU-initiated. through a Sanggunian Resolution), DPWH, and others, whenever necessary; and
6. Geohazard Identification Report (GIR) of the area.
7. Environmental Compliance Certificate (ECC)

The ECC is added in the list of the requirements under Section 8 of DAO 2018-14 since Section 9.6 requires such submission, and reclamation project or component requires an ECC. According to DAO 2014-005 reclamation would require an ECC, supported by an IEE for <5 hectares, or by an EIS for ≥ 5 hectares)

Procedure. The issuance of Area Clearance shall follow the following procedure:

1. The Proponent pays non-refundable processing fee at the Office of the Regional Executive Director (ORED)

(a) For the first three hectares	-	P5,000.00
(b) For every succeeding hectare or a fraction thereof	-	P1,000.00/ha
2. The Proponent files the application with the supporting documents with the Office of the Regional Executive Director (ORED)
3. The RED convenes the Composite Team shall then conduct field assessment / inspection to ascertain the prequalification of the area for reclamation.
4. The Proponent responds to the needs of the Composite Team like the cost of the inspection activity, subject to existing government rules and regulations.
5. The Composite Team conducts site assessment/inspection to gather information pertinent to the adjoining area of the area applied for, such as Land Classification Map, Municipal Index Map, Cadastral Map, importance of the area for biodiversity conservation, relevant laws, regulations, local ordinances and other references to facilitate the processing of the application. This includes geotagged photos of the area on different angles and of its panoramic view, as well as the improvement/s introduced, landmarks, identifying features and settlement, if any.



6. The composite team prepare within fifteen (15) days a narrative report to be submitted to the RED which shall include, but not limited to, the following:
 - i. Area status such as whether it is covered by existing tenurial contracts or agreements or whether the approval of the application will violate existing laws, proclamations, regulations or local ordinances; and,
 - ii. Statement of findings and recommendations on the results of the pre-qualification for reclaiming the area.
7. The Team submits to the RED the application documents together with its recommendation and the draft Area Clearance (**Annex 5-41**).

With the incorporation of ECC in the filed documents by the proponent, the Composite Team would skip such requirement in the procedure stipulated in Section 9.6 DAO 2018-14.
8. The RED endorses the application to the Office DENR Secretary for final approval and issuance of the Area Clearance.
9. The Office of the Secretary transmits the approved Area Clearance, together with its complete records to the RED concerned, who shall be responsible for the transmittal of the duly approved clearance to the applicant and custody of the records



5.11 LLDA Clearance

Overview. The Laguna Lake Development Authority was created on July 18, 1966, under RA 4850 or the An Act Creating the Laguna Lake Development Authority, Prescribing Its Powers, Functions and Duties, Providing Funds Therefor, and for Other Purposes. Section 4(d) of R.A. 4850, as amended, authorizes LLDA to issue the necessary clearance for all approved proposed plans, programs, and projects unless the proposals are not in consonance with those of the Authority or that those that will contribute to the unmanageable pollution of the Laguna Lake waters or will bring about the ecological imbalance of the Region.

The list of rules and regulations of LLDA Clearance is provided under LLDA Board Resolution No. 408 Series of 2011 or Approving the Revised Definition of Developmental Activities Required to Secure LLDA Clearance and Its Implementing Rules and Regulations, and for this Purpose, Amending Board Resolution No. 223, Series of 2004 and Board Resolution No. 286, Series of 2006.

Covered Projects. Under BR 408 s 2011, the covered development activities are listed under Rule 2 Section 5 inclusive under Section 5.5.5 Infrastructure projects such as roads, bridges, viaducts, tunnels, railways, power plants, power transmission sites and substations, water abstraction/ water treatment facilities, water impounding structures, dams including back filling, reclamation, and other engineering projects involving earth moving or physical alteration of the area, except the following, among others:

- i. Construction of temporary or permanent minor structures or facilities accessory to existing installations, provided that such installations are allowable, conforming or in conformity with local zoning ordinances and/or the National Building Code, such as signs, fences, curbs, gutters, sidewalks, driveways abutting existing streets, and pedestrian overpass, etc.
- ii. Enhancement/mitigating projects of soil erosion control measures through either vegetative (e.g., planting/ reforestation, bench-brush, fascine, etc.) or engineering/ structural (e.g., check dams, gabions, riprap/ retaining walls, etc.); and
- iii. Rehabilitation of existing structures (including maintenance and repair works involving negligible, no expansion nor change of land use beyond that which is/was previously existing).

Requirements. When the proposed infrastructure project is located within the LLDA jurisdiction (**See Annex 5-42**) the Implementing Office shall secure LLDA Clearance/Expansion or Exemption.

The following are the documents required for LLDA Clearance/Expansion (LC/LX) Application:

1. Duly accomplished and notarized application form (**Annex 5-43**).
2. Environmental Compliance Certificate or Certificate of Non-Coverage, whichever is applicable.



3. SEC-approved Articles of Incorporation including updated General Information Sheet (for corporation) or Articles of Cooperative duly approved by CDA (for cooperative) or valid Certificate of Business Registration from DTI (for single proprietorship).
4. Environmental Impact Assessment, Initial Environmental Examination, or Project Description (**Annex 5-44**)/Engineer's Report, whichever is applicable.
5. Plans (site development plan, vicinity plan, drainage/sewer plan, floor plan/plant layout) duly signed by the chief executive officer/owner and engineer.
6. Shoreland Certification, if located within shoreland barangays.
7. Locational Clearance, if available.

The application documents include the original copy of ECC, SEC-approved Articles of Incorporation or Certificate of Business Registration for authentication purposes, or alternatively a certified true copy thereof from DENR, SEC or DTI. The application is submitted in three copies so that one of them will be the receiving copy.

Procedure, Manual Application. The application may be filed manually or online.

1. Upon manual filling of application, and favorable assessment of documents by assigned LLDA staff, the proponent shall pay the processing fee and the applicable clearance fee in accordance with the schedule of fees, presently as listed under B.R. 224, Series of 2004 (**Annex 5-45**). Processing fee for LLDA Clearance is set at PhP 1,600.00.
2. The proponent shall submit a new application and pay fees and such fines and penalties imposed if the previous application has been declared suspended and revoked pursuant to Section 10 of IRR,
3. Upon submission of an application and supporting financial documents required, LLDA will provide an application number and process the application (**Annex 5-46**), in 20 days, and in conformity with the approved requirements and procedure provided LLDA Citizen's Charter (**Annex 5-47**)²¹.

Procedure, Online Application

1. For online application (**Annex 5-48**), the Proponent will first register (at <https://lldaonline.ph/>) the User Account and then logs with the acceptance of terms and conditions.
2. Click the Clearance button and fill out the required information and uploads the documents for evaluation in three (3) days.
3. The Proponents checks the application online and for a favorable review, pay online.
4. A Conditional Clearance, for printing by the Proponent will be issued.
5. The procedure takes 7 days to complete.

²¹ https://llda.gov.ph/wp-content/uploads/dox/citizens_charter/citizens_charter.pdf



6. Within 2 months, LLDA continues to process the application (**Annex 5-49**) in 20 days, with site inspection, internal reviews and endorsement, thereafter, issues the Locational Clearance.

LLDA Clearance Expansion. The Charter provide the procedure for the LLDA Clearance expansion is provided in **Annex 5-50**.

Documentary Requirements. The following documents are required for LLDA Clearance Exemption (LE) Application.

1. Duly accomplished and notarized application form.
2. Project Description.
3. Vicinity Map.
4. SEC-approved Articles of Incorporation including updated General Information Sheet (for corporation) or Articles of Cooperative duly approved by CDA (for cooperative) or valid Certificate of Business Registration from DTI (for single proprietorship).
5. Shoreland Certification, if located within shoreland barangays.
6. Proof of exemption (Certification that business is classified as a Barangay Micro Business Enterprise, TCT, Water Bills, DOLE Certification)

LLDA Clearance Exemption. The LLDA Citizen's Charter also provides the requirements and procedure for application for LLDA Clearance Exemption (**Annex 5-51**)



5.12 Tree Removal or Relocation Permit

Overview. The Implementing Offices shall apply for Tree Removal and/or Relocation Permit at the DENR, as may be applicable at the project site Community Environment and Natural Resources Office (CENRO). This is in accordance with DO 116 s2018 (Tree Cutting and Earth-balling Permit Application Process and Requirements for DPWH Infrastructure Projects), which is in response to DAO 2018-16 (Guidelines in the Processing and Issuance of Permits on the Removal and Relocation of Trees Affected by DPWH Projects). However, DAO 2018-16 was amended by DAO 2020-06 Amending Certain Provisions and Expanding the Cover of DENR Administrative Order No. 2018-16 or the "Guidelines in the Processing and Issuance of Permits on the Removal and Relocation of Trees Affected by DPWH Projects. The amendment is on Section 2, Items 1 and 5, with the inclusion of Items 6, and 7.

Documentary Requirements. Under Section 2, the following requirements (as amended) shall be submitted by the DPWH to the CENRO with jurisdiction over the projects, to wit:

1. Final and Approved Infrastructure Development Plan with tree charting (e.g., Road Alignment Plan, Building Plan, Detailed Engineering Design, or similar plan) indicating the geotagged location of individual trees affected by the project, to be numbered sequentially, as basis of validation by the DENR during actual cutting operations.
2. Appropriate Environmental Clearance (CNC/ECC).
3. Endorsement from the concerned Local Government Units.
4. Waiver/Consent corresponding to appropriate infrastructure plan in the case of tree cutting within private lands; and
5. The application for Tree Cutting and/or Earth-Balling Permits may be processed and issued even without an approved tenurial instrument.
6. Certified True Copy of Clearance/Resolution from Protected Area Management Board (PAMB). The PAMB Clearance shall include an endorsement for the EMB Regional Office to determine whether the development project or activity is eligible for a Certificate of Non-Coverage (CNC) or should undergo the scoping process under the EIS System.
7. Clearance from Palawan Council for Sustainable Development (PCSD), and Philippine Coconut Authority (PCA) among others as may be applicable.

Procedure. Here are the following processing guidelines:

1. Evaluation of the complete requirements shall be done upon receipt thereof. Application with incomplete requirements shall not be acted upon and returned to the applicant immediately.
2. The concerned CENR Office shall issue the corresponding Tree Cutting Permit and/or Earth-balling Permit (TCP/BP) within three (3) working days indicating the number of trees based on the analysis of the appropriate infrastructure plan with tree charting or if necessary, on the result of actual ocular inspection
3. The CENR Office may conduct ocular inspection to verify the correctness of the submitted requirements in coordination with the DPWH before issuance of the TCP/EP on the third day as may be warranted



4. Determination of the number of trees, location and its species nomenclature/common name, classification if naturally grown or planted, and corresponding volume shall be verified and determined upon the conduct of geotagging and tree scaling by CENRO concerned during the actual tree cutting activities. These shall serve as basis for determining the tree replacement and schedule of hauling logs and to the concerned DENR office, computation of forest charges, among others.
5. Tree removal and relocation operations, including turnover and transport of logs, shall only be done under the presence and close supervision of the DENR. Correspondingly, the DPWH shall shoulder all operational costs.
6. In case of tree removal and relocation in public forestlands, TCP/BP applications shall only be processed upon issuance of appropriate LTI secured by the DPWH from the concerned Regional Directors, subject to existing regulations.
7. To further facilitate issuance of TCP/EPs, concerned DENR Office are required to attend consultation meetings during pre-project activities of the DPWH.
8. The design of the road projects should always consider the least number of trees to be affected.

5.13 Coconut Tree-Cutting Permit

Overview. The Implementing Office shall apply a Coconut Tree-Cutting Permit at the Regional Philippine Coconut Office whenever the proposed project will cut coconut trees. This is in accordance with PCA AO 03 s. 2018 or the Revised Implementing Rules and Regulations of Republic Act No. 8048, as Amended by Republic Act 10593

Documentary Requirements. ²²

1. PCA prescribed application form for Permit to Cut
2. Valid I.D. or Community Tax Certificate
3. Proof of ownership or legal possession of affected land (TCT's, Tax Declaration, etc.)
4. Affidavit of non-encumbrance
5. Additional requirements:
 - a. Duly notarized written consent or Special Power of Attorney (SPA) if applicant is through a representative
 - b. Duly approved board resolution for corporation
 - c. Notarized written consent of co-owners
 - d. Sangguniang barangay resolution
 - e. Final conversion order issued by DAR/Cert. of Conversion to other crops issued by DA.

²² <https://pca.gov.ph/pdf/disclosure/permitcut.pdf>

**Procedure**

Applicant	Service Provider	Duration under normal circumstances
1. Fill-out PCA/Prescribed Application Form for Permit to Cut (PTC) and submit supporting documents	Agriculturist determine the completeness of application and its supporting documents	5 min
2. Pay to the Cashier the corresponding non-refundable cutting permit fee and filing/processing fee	Process payment and issue Official Receipt (OR)	5 min
3. Present OR and wait for the application to be processed/ verified <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> Cutting Permit Fee P25.00 per every tree applied for cutting Filing/Processor Fee to be paid in the following rates: P100.00 - 1 to 50 coco trees P250.00 - 51 to 100 coco trees P500.00 - 101 to 500 coco trees P1,000 - 501 or more coco trees </div>	Agriculturist post the application in the Barangay Hall and the site/area subject of application for 7 days. Also conduct verification, field and ocular inspection and consultations to determine veracity of documents Submit to PCDM his recommendation on whether application should be granted or not.	9 days
4. Sign and receive the approved Application for PTC	Issue the Permit to Cut	1 day

5.14 Engineering Geological and Geohazard Assessment Report (EGGAR)

Overview. The Implementing Office shall ensure EGGAR is prepared and considered in Project design.

The regulatory framework pertaining to Engineering, Geological, and Geohazard Assessment Report (EGGAR) consists of issuances shown in **Annex 2-6**. Under DAO 2008-28 EGGAR was required in ECC applications. MGB MC 2000-33 provide the guidelines and outline in preparing EGGAR. This was followed by EMB-MGB-HLURB MOA 2000 specific to housing and land development projects. EGGA as additional requirement in ECC acquisition was clarified under DMC 2000-21, as follows:

"All private or government subdivision and housing projects are required to undergo Engineering Geological and Geohazard Assessment as additional requirement for ECC applications. Other land development and infrastructure projects shall likewise undergo Engineering Geological and Geohazard Assessment in connection with their ECC applications should this be required by the Environmental Management Bureau (EMB). In this connection, guidelines shall be prepared by EMB, in consultation with MGB."

However, EMC 2007-002 issuing Revised Procedural Manual for DAO 2003-30, in its Annex 2-10 no longer requires EGGAR in the EIA at FS stage but requires integration of FS relevant geological parameters with the Geology Module in the EIA.



Technical Requirement for EGGAR. Geohazard assessment has been part in the design guideline, criteria and standards for DPWH Projects, like in a manual developed in 1984. The manual was updated to 2015 Edition through DPWH DO 179 s. 2015, which has Volume 2A for geohazard assessment. DPWH normally contracts out feasibility studies of infrastructure projects covering EGGAR adopting the outline in MGB MC 2000-33 (**Annex 5-52**), with the following main topics:

- General Information
- Regional Setting
- Site Geology
- Hazard Assessment
- Conclusions and Recommendations

The minimum requirements for maps and documents consist of:

- Regional Geologic Map (with regional cross section)
- Site Geologic Map (with representative cross sections and Index Map)
- Stratigraphic Column
- Relevant Hazard Map (see Section IV)
- Engineering Geologic Map



6 NATURAL ENVIRONMENT SAFEGUARDS IN OPERATION

6.1 Introduction

This section is a guide in collecting information about project environment throughout the project life cycle. Under the Philippine EIS System, project environment covers the infrastructure footprint (as direct impact area), and neighboring area of influence (deemed also as direct impact area with significant potential impact, or indirect impact area with low or no significant potential impact). By convention, the project environment is composed of land, water, air, and people. The variety of environmental parameters to measure (quantitatively or qualitatively) and volume of data to describe these components would depend on the project type and size and kind of environment. Data collection starts at the Project Identification stage. Collection of more sets of environmental data continues during the feasibility stage. More detailed information would be collected for detailed engineering design and in the acquisition of right-of-way. During project implementation, the status of environment is monitored for assessing the effectiveness of measures as will be shared within DPWH, regulatory agency, and other stakeholders.

The Project Identification Phase involves screening site-specific potential impacts, potential risks, mitigation measures, monitoring activities, qualified stakeholders, regulatory environmental requirements, and other safeguards. This set of information is used in identifying and recommending tentative alternatives for site, design, and construction methods of the infrastructure. Screening would also provide insights on what could delay the project. Thus, it is a good practice to allow safeguard activities to happen at the early stage of the project, with back up information from the data base.

At that stage, the initial project technical information needed are the nature, size, administrative location, and map of the project. These are used in screening activities (i) the project for Category (A, B, C, or D) and applicable certificates under the PEISS; (ii) other government like regulatory instruments; (iii) the environment to characterize; (iv) potential environmental impacts and measures; and (iv) list of stakeholders.

With respect to the application for an environmental certificate, a Category D Project is not covered under the PEISS. The project application form for a Certificate of Non-Coverage requires only the location for the information on the environment. The online CNC application requires a declaration if the proposed project is not within a protected area. Category C Projects can also be issued a CNC, but the required additional information is a description of how the project enhances the environment or address environmental issues. The description of the project is expanded with the inclusion of project components, project phases, project waste, project cost, and project duration.

More environmental information is generated for Category B Project, which is an environmentally non-critical project (ENCP) but located in an environmentally critical area (ECA). This project is required an Initial Environmental Examination (IEE) Checklist when it is applied for an Environmental Compliance Certificate (ECC). Most of the required information in the table of Environmental Impact Management and Monitoring Plan (EIMP) are general and in range of values. But more site-specific information is obtained as input Work and Financial Planning.



The volume of data further increases, with in-depth discussion, if proposed project falls under Category A. For ECC application, this project is required a full-blown Environmental Impact Statement (EIS), which is a study, guided by the Technical Screening (Scoping) Checklist with the deployment of environmental consultants.

The set of environmental data generated prior to project implementation is deemed baseline data, grouped as secondary (from publications, studies, reports), and primary (from field works of EIA document preparers). Among the first sources of environmental data is the NAMRIA topographic map, posted maps on the internet, and documents compiled by DPWH over the years and even personal knowledge. Sources of information include Comprehensive Land Use Plans of LGUs, and River Basin Master Plans like for Agno River²³. It is a good practice to have an electronic and structured compilation of these plans by DPWH Regional and District Offices.

Key potential environmental impacts are used to identify the parameters to describe. PEISS systematically assesses the impact spatially as land, water, air, and people to be easily visualized by location, with the aid of a map. This is followed by a thematic approach like quality, biodiversity, social aspects with corresponding professional specialization. The activity outlines the impact location, nature, scale, duration, frequency, and reversibility. The boundaries of the area of influence are set. Impact assessment may be qualitative or quantitative depending on the availability, practicality, and even cost of the methods, which include a simple analysis of chain of events, literature research, records review, expert statement, and even mathematical modeling. Local and international agencies provide guidance documents in this respect.

A routine visualization of the impacts involves the listing of project physical components activities in a location, aided by a NAMRIA topographic map which shows the natural features, built up areas, and political boundaries, among others. The initial list of stakeholders can be marked for identification of jurisdictional and social issues. The surveying work that follows a favorable entry may result in speculations of the locals on what the project is all about. The entry and staging of construction equipment, and any base camp or office will use space. These may involve removal of structures, vegetation, and earth materials. Various construction materials will be introduced in the area.

As an overview, the direct impact of construction works on the natural environment (physical and biological) may involve removal of vegetation (trees, wildlife habitat), weakening of side banks in sloping areas, accelerated soil erosion with increased siltation in the downslope water body. Use of heavy equipment would cause gas emission, noise, and dust. Loose soil would cause dust generation during windy conditions. Tapping the nearby quarry materials is a matter of transfer of materials and may cause bank instability or temporary increase in the turbidity of nearby water bodies. A deeper impact assessment may cover effects on the ecological function like cases in protected areas. Impacts on the

²³ DENR Region 1, Development of Climate-Responsive Integrated Master Plan for Agno River Basin, Comprehensive Report on the Studies Conducted (Phase 1)



social environment and would be long term include change in the ownership, removal of properties, displacement of livelihood, displacement of occupants, and others.

Effect of construction works may appear to be temporary on the natural environment, but once constructed, a long road project may cause long term effects on the ecological setting and functions with the change in land use and in-migration of people.

The discussion below in describing project environment is guided by the Technical Screening (Scoping) Checklist used for a full-blown EIS under the PEISS, with key potential impact upfront.

6.2 Project Maps

Proponents of any project proposal should include early the plot of the footprint of proposed project on a map, with an approximate shape file in print and electronic form. This project would result in an early and fast screening of project with respect to project environment and impact for early environmental planning.

Initial location maps can be generated from the DPWH road and bridge inventory GIS software (<https://www.dpwh.gov.ph/dpwh/gis/rbi>). DO 124 s.2016 was issued for the full institutionalization of the road and bridge information application (RBIA) and related road and bridge data collection procedures. The Road and Bridge Information Administration Section (RBIA), and Geographical Information Administration Section (GIAS) of the Statistics Division (SD), Planning Service; and the Planning and Design Division/Sections of the Regional/District Engineering Offices are responsible for the maintenance of thoroughly vetted data in the RBIA and the Locational Referencing System/GIS map. The GIAS updates location referencing system, maintains the geographic representation of the road network (LRS); maintains all electronic base map in the Department; maintains an inventory of all spatial (geographic) data in the Department; provides services as necessary to produce maps (hard copy and electronics) for other DPWH units; assists in conducting trainings on Geographic Information; and processes the conducted GPS survey data.

Among the first maps is a base map derived from NAMRIA topographic map of scale 1:50,000 found in <http://www.namria.gov.ph/topo50Index.aspx>, inasmuch as there are a lot of features that translates into project environment like town/city administrative boundaries, elevation by contour lines, land forms, mountain peaks, volcano, water bodies, vegetation cover, built up areas, roads, bridges, population centers, and others. The NAMRIA maps are by the various government agencies and is a minimum requirement under the Revised Procedural Manual of DAO 2003-30. Downloadable topographic maps would still need slight rotation to ensure the vertical north-south orientation, especially for stitching two topographic maps. NAMRIA has also other maps like land classification and hazard maps.

There are available software used to work on the maps. MS Office Picture Manager and Paint are conveniently usable for minor works. The minimum labelling of the maps includes the title, north arrow, scale bar, legends, map source, and longitude and latitude ticked on the side of the frame of the map. The Philippines uses WGS 84 reference coordinate system.



Supplemental to the NAMRIA map is the use of popular Google Earth Pro software which allows plotting of project footprint, and generate measures of distance, area, shape file, and with finer details of the project site. Historical imageries are also viewable the trend in the changes of the physical features of the project site.

6.3 The Land Component

6.3.1 Land Use and Classification

6.3.1.1 Definition

Land Use generally refers to the manner of utilizing the land, including its allocation, development and management. In the context of the Philippines EIS System, baseline characterization and impact assessment for Land Use centers on the project's impact on the existing land use in the project area, conflict with existing tenurial instruments, protection of protected areas and impacts on visual aesthetics.

6.3.1.2 Baseline Data

Primary Data	Not Applicable
Tools/Equipment Needed	
Procedure on how to collect	
Reference	
Applicable Annexes	

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
<ul style="list-style-type: none"> i. Description and map showing the project area in relation to existing land use and classification. ii. Identification and location map of environmentally critical areas where the project is located or near the project area. iii. Identification of areas vulnerable/susceptible to natural hazards where the project is located or near the project area (include map/s). iv. Determination if the project area is under CARP or with CADC / CADT / CALC/ CALT, with IFMA/CBFMA, within COC, within MPSA or other tenurial instruments and identify corresponding existing tenure issues including presence of informal settlers. v. Landforms/ landscape/structures with images; and 	<ul style="list-style-type: none"> a. LGU Comprehensive Land Use Plan. b. DENR Forest Land Use Plan (FLUP), Integrated Resource Management Plan (IPMP). c. DENR Integrated Ecosystem Management Plan (IEMP). d. Coastal Fisheries Resource Management Plan. e. NCIP Ancestral Domain Sustainable Development Protected Plan (ADSDPP). f. DAR Agrarian Reform Community Development (ARCDP). g. DA Agricultural and Fisheries Modernization Plan (AFMP). h. DA Protected Areas for Agricultural and Agro-Industrial Development (NPAAD), and Strategic and Agricultural and Fisheries Development Zones (SAFDZ).



vi. Existing solid waste management and related land management scheme in the area.	<ul style="list-style-type: none"> i. DOE for Energy Project Services Contracts j. MGB for Mining Tenement maps k. DOT/LGU for Tourism Areas l. DENR BMB for Protected Areas and Key Biodiversity Areas
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6.3.1.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
Impact in terms of compatibility with existing land use	Assess compatibility of the proposed project vis-à-vis actual land use and the approved comprehensive land use plan/zoning classification, ECA Classification and/or the coastal resource management plan of the LGU, if any.
Impact on compatibility with classification as an Environmentally Critical Area (ECA);	Identify and assess impact in terms of land tenure issues in relation to project implementation.
Impact in existing land tenure issue/s;	Identify and assess impacts in terms of land tenure issues in relation to project implementation.
Impairment of visual aesthetics; and	Identify and assess impact of the project on these visually significant landforms/landscape structures.
Devaluation of land value as a result of improper solid waste management and other related impacts.	Identify and assess impacts of the estimated generation of solid wastes and other related issues on the existing waste management scheme.

6.3.1.4 Potential Impacts

Pre- Construction	Construction	Operation and Maintenance	Decommissioning
	<p>Increase in solid waste generation</p> <p>Permanent change in land use (i.e., from agricultural land to</p>	Permanent change in land use (i.e., from agricultural land to road)	



	road)		
	Encroachment in ECA		



6.3.2 Pedology

6.3.2.1 Definition

Soil is an upper thin layer of the surface of the earth composed of a mixture of fragments of rocks, organic matter, and air in greatly varying proportions and having developed layers produced through the action of climate and living organisms (bacteria, fungi, plants and animals).

Soil as a natural resource has physical and chemical properties that dictate its carrying capacity and resiliency in any intervention that will be introduced into it. Misuse of the soil may lead to its physical and chemical deterioration such as soil erosion and soil contamination, respectively.

In environmental studies, these physical and chemical properties are being assessed and monitored to determine if there is any change in these properties overtime due to the intervention applied. If the use and management of the soil has negative impact(s), appropriate mitigating/conservation measures will be done for its rehabilitation and conservation.

6.3.2.2 Baseline Data

Primary Data	
Tools/Equipment Needed	<ul style="list-style-type: none"> • Soil Auger, • GPS, • Topographic and slope map of the project area, • abney hand level
Procedure on how to collect	<ol style="list-style-type: none"> a) Preliminary delineation of slope range differences and plotting of tentative soil observation sites with the use of topographic map and satellite imagery. b) In the field, conduct the soil characterization of selected representative soil observation sites with the use of soil auger, and slope measurement with abney hand level. c) It should be considered that soil samples be taken from the topsoil (0-20cm) and subsoil (21-50cm) portion of the soil horizon d) Finalized soil mapping units with the use of topographic map and satellite imagery. e) Laboratory analysis to be done: <ul style="list-style-type: none"> • Physical analysis: Soil texture • Chemical analysis: pH, Nitrogen, Organic Matter, Phosphorus, Potassium and Heavy metals (Arsenic, Cadmium, Lead, Mercury and Chromium Hexavalent)
Reference	Bureau of Soils and Water Management (BSWM). Map Library. http://www.bswm.da.gov.ph/
Applicable Annexes	Annex 6-1

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
i. Soil Mapping Units	a. Bureau of Soil and Water Management for the soil mapping units and soil type.
ii. Soil Type of the Project area	b. PAGASA for the climate/rainfall data



iii. Land Use of the Project area (Section 6.1.1 above) iv. Rainfall data v. Slope Map vi. Water and wind erodibility potential. vii. Sediment sources and load. viii. Riverbank stability	c. LGU/DENR for the land use
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6.3.2.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
Soil erosion/Loss of topsoil/overburden	Describe the capability of land to accommodate the proposed project with minimal or without soil erosion/loss of topsoil/overburden.
Change in Soil Quality/Fertility	Assess the impact of project activities including the possibility of spills on soil quality and fertility

6.3.2.4 Potential Impacts

Pre- Construction	Construction	Operation and Maintenance	Decommissioning
	Soil contamination as a result of spills Increased soil erosion as a result of improper spoil disposal Soil contamination as a result of increased domestic waste	Soil contamination from accidents	



6.3.3 Geology and Geomorphology

6.3.3.1 Definition

Geology is an earth science concerning the solid earth, the rocks of which it is composed, and the processes by which they change over time. It describes the structure of the earth on and beneath its surface, and the processes that have shaped that structure.

The Philippine Archipelago is situated in a complex tectonic zone created by the interaction between the Philippine Sea Plate and the southeastern edge of the Eurasian Plate (Aurelio, 2000). The formation of this so-called Philippine Mobile Belt is influenced by subductions, collisions and major strike-slip faults, notably, the 1,300-km long Philippine Fault Zone (PFZ) that transects the entire length of the archipelago.

6.3.3.2 Baseline Data

Primary Data	Not Applicable
Tools/Equipment Needed	
Procedure on how to collect	
Reference	
Applicable Annexes	
Procedure on how to collect	

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
<ul style="list-style-type: none"> i. Topographic Map ii. Geological Map iii. Hazard Map iv. Stratigraphic Structure v. Geomorphology Map vi. Seismicity Map vii. Rock types viii. Historical occurrence of hazards (flooding, landslide, earthquakes, etc.) 	<ul style="list-style-type: none"> a. Mines and Geosciences Bureau (MGB). b. Philippine Institute of Volcanology and Seismology (PHIVOLCS). c. National Mapping and Resource Information Authority (NAMRIA); and d. Bureau of Soils and Water Management (BSWM).

6.3.3.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
Change in surface landform/ geomorphology / topography /terrain /slope	Identify and assess project impact in terms of the changes in surface landform/ topography/ terrain/ slope including existing hazards as maybe aggravated by climate change.



	Assessment may include discussion on significant changes together with a schematic diagram of before and after scenarios.
Change in sub-surface geology/underground conditions	Identify and assess project impact in terms of the changes in sub-surface geology and inducement of subsidence, liquefaction, landslides, mud/debris flow, to the environment including the possibility of aggravating existing natural hazards. Assess the impacts of geologic hazards and planned earthworks on project facilities. Note in the discussion how climate change can aggravate the hazards and impacts.
Inducement of subsidence, liquefactions, debris flow	

6.3.3.4 Potential Impacts

Pre- Construction	Construction	Operation and Maintenance	Decommissioning
	Permanent change in surface form from road construction Increased landslide Increased soil erosion		



6.3.4 Terrestrial Flora

6.3.4.1 Definition

Terrestrial ecology involves the assessment of plants and animals in the affected areas and vicinity of the project. Flora Assessment includes identification and monitoring of ecosystems and habitats as well as inventory, identification, assessment, and monitoring of plant species in the area. Accuracy of floral assessment is heavily dependent on the sampling design and intensity of the proportion of area subjected to inventory. One of the biggest assumptions of any sampling technique is that the sample is representative of the whole area. To ensure proper representation of the different vegetation and forest formation, sampling sites should be well stratified. It should be emphasized that stratification doesn't always need to have proportionate sampling efforts for each vegetation type. A more important consideration is the ecosystem's diversity and complexity.

6.3.4.2 Baseline Data

Primary Data	
Tools/Equipment Needed	GPS, Project Map
Procedure on how to collect	<p>Quadrat Method:</p> <p>A quadrat is a frame that is laid down to mark out a specific area of the community to be sampled. The occurrence of plants is recorded using an appropriate measure of abundance within the quadrat frame. Quadrats may be square, rectangular or circular and they may be of any appropriate size. The quadrat method can be used in virtually any vegetation type to quantify the plant community. Repeated quadrat samples are taken because a single quadrat cannot be expected to sample a community adequately.</p> <p>Procedure:</p> <ul style="list-style-type: none"> ✓ Divide the community into sub-areas depending on topography, aspect, physical features and apparent floristic differences. ✓ Collect samples from all quadrats and add them together to constitute an adequate sample of the community. ✓ Calculate the overall cover, density and frequency estimates for each species from the entire data set by combining all of the quadrats together. ✓ Compute relative cover, relative density and relative frequency values to determine the proportional representation of each species relative to the entire plant community. <p>Line Intercept Method:</p> <p>The line intercept technique is a plotless method of analyzing vegetation especially applicable in studying grassland</p>



	<p>communities. This method is easier to use than the quadrat method which employs clipping and harvesting above-ground biomass. It makes use of transect lines, where the species encountered by the line are identified and the length of the transect line intercepted (I) for each individual of any species is measured. From this pool of data, one can determine the importance value (IV) of each species encountered and can also estimate the total percentage of the ground surface covered by vegetation.</p> <p><u>Procedure:</u></p> <ul style="list-style-type: none"> ✓ Make a reconnaissance of the area to determine obvious grassland community types. These may be earmarked as strata; each stratum represents a homogenous community. A stratum may therefore be the objective of a line intercept vegetation sampling. ✓ Establish a baseline along one side of the stratum or area with aid of steel tape complemented by tape measure scale. The series of points along this baseline may be selected by a random, stratified random, or systematic procedure. ✓ Construct the transect using selected points as starting points, the transect should be perpendicular to the baseline. ✓ Determine the following values for each species: a) total number of species encountered (N); b) total of intercept lengths (I); c) number of transect intervals in which species occurred; and d) total of reciprocals of maximum plant widths ($> 1/M$). ✓ Compute the relative density, dominance, relative dominance, frequency, and importance value per species. <p><u>Collection of Voucher Specimens</u></p> <p>Sample specimens for each species that are difficult to identify in the field shall be collected and tagged with a unique identifier. These specimens shall be brought to the base camp and processed at the end of each day of survey in order to preserve the specimens prior to identification at the end of the survey period.</p> <p>The Schweinfurth's method (commonly known as "wet collection" method), a standard plant collection technique should be employed for specimens that were difficult to identify in the field. This involves the soaking of properly labeled specimens in ethyl alcohol to avoid rapid wilting and crumpled drying. Important information as to the habitat, physiognomy, slope and aspect, characteristics of the plants that will be lost after drying, DBH and TH should be noted down. The specimens shall be packed in polyethylene bags and sealed for further analysis in the laboratory.</p> <ul style="list-style-type: none"> ✓ With the use of pole cutter (sungkit), collect a twig from the tree. A goof voucher specimen should (as much as possible)
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	<p>have complete plant parts including bark, leaves, flowers and fruits.</p> <p>✓ Using pruning shears cut a portion of the collected twig into desired length (the size should fit in a 42cm x 29 cm herbarium mounting sheet). Specimens should have at least 3 leaves so as to show the phyllotaxy (leaf arrangement) of the species. For those species with large and/or compound foliage, leaves can be folded to make it fit with half a size newspaper.</p> <p>✓ All specimens should be properly tagged and coded. Each code (usually the initial of the collector and the sequential collection number i.e., PLM 001) corresponds to the voucher number of the individual trees in the field data sheet.</p> <p>✓ Take photos of each fresh specimen with the tag on a white background (illustration board or bond paper). This could help in the future</p> <p>identification of the species by comparing it with the database of fresh plant specimens.</p> <p>✓ Press each specimen in between newspapers. Put the layered specimens inside an herbarium bag then spray/ pour denatured alcohol in it. Each herbarium bag may accommodate 40 specimens which need about 1 liter of denatured alcohol for proper preservation.</p> <p>✓ Seal the herbarium bags with packaging tape before bringing them to the laboratory.</p> <p><u>Estimation of the Importance Value of Species</u></p> <p>To characterize floral composition of the study area, all information gathered in the field shall be tabulate and analyzed. Relative density, relative dominance and relative frequency values for each species should be computed to obtain their Importance Value (IV), a standard measurement in forest ecology to determine the rank relationships of species. IV should be computed separately for the upper canopy or tree species.</p> <p><u>Estimation of Diversity Indices</u></p> <p>Diversity indices (Shannon, Simpson's and Evenness index) for each transect and quadrat can be generated using any available biodiversity software (i.e., PAST, MVSP, BioPro, Diversity, etc.) with the data on the number of species and abundance for each sampling quadrat. Shannon Index gives an estimate of species richness and distribution. Evenness Index tells us how evenly species and/or individuals are distributed inside a plot or quadrat. Simpson's Index gives the probability of getting different species when two individuals are drawn (with replacement) inside a plot. Basically, the higher the value for any of the diversity indices, the greater the species diversity is in the area and vice versa. The classification scheme developed</p>
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by Fernando et al. (1998) shall be used for the interpretation of Shannon diversity index.

Diversity Indices

Species Richness (S) = Total Number of species

Abundance (Abund) = Number of individuals in a species

Frequency (Freq)

$$= \frac{\text{No. of times a species occurred in all points}}{\text{Total number of points}} \times 100$$

$$\text{Relative Abundance (RA)} = \frac{\text{Abund}}{\text{Total Abundance}} \times 100$$

$$\text{Relative Frequency (RF)} = \frac{\text{Freq}}{\text{Total Frequency}} \times 100$$

$$\text{Importance Value (IV)} = \frac{\sum \text{of Relative Values}}{\# \text{ of Relative Values Used}}$$

Fernando Biodiversity Scale

Relative Values□	Shannon (H') Index□	Pielou (J') Evenness Index□
Very High□	3.5 and above□	0.75-1.00□
High□	3.0-3.49□	0.50-0.74□
Moderate□	2.5-2.99□	0.25-0.49□
Low□	2.0-2.49□	0.15-0.24□
Very Low□	1.9 and below□	0.05-0.14□

Determination of Endemism and Ecological Status

Endemism and ecological or conservation status of the different species shall be assessed to determine the ecological importance of the vegetation in the area. The geographical distribution of plant species has been very useful for assessing biodiversity values of regions, and islands. Species confined to a particular site should be given particular conservation management strategies, as they are more vulnerable to disturbance due to their narrow range. The online database, Co's Digital Flora of the Philippines (www.philippineplants.org), and other published literature (Enumeration of Philippine Flowering Plants Vol. 1-4 (Merrill 1923-26); Revised Lexicon of Philippine Trees (Rojo 1998) can be consulted to determine the places of distribution of each species. The conservation status of each species shall be based on the most recent recommendations of the Philippine Plant Conservation Committee (PPCC) of the Protected Areas and Wildlife Bureau (PAWB), DENR officially issued as DENR Administrative Order No. 2017-11 better known as "Updated National List of Threatened Philippine Plants and their Categories", and the listing of threatened species by the International Union for Conservation of Nature better known as the IUCN red list. Some



	<p>of the ecologically important species present in the watershed can be used as biodiversity indicators for the periodic monitoring.</p> <p><u>Estimation of Biodiversity Value</u></p> <p>A matrix to obtain the true biodiversity value of each quadrat was developed to determine the most important area for biodiversity conservation. The evaluation takes into consideration not only the number of species (richness) or proportionate distribution of individuals but also the number of threatened species and endemic species. A range of values for each criterion (species richness, number of threatened species, and number of endemic species) was obtained and a three-point scale was used to rank the sampling unit. The average of the derived values was taken across all the plots.</p>
Reference	<p>FMB Technical Bulletin 16-A</p> <p>DENR DAO 2017-11 Updated National List of Threatened Plants and their Categories</p>

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
<p>i. Updated National List of Threatened Plants and their Categories</p> <p>ii. IUCN Red List of Threatened Species</p>	<p>a. DENR DAO 2017-11</p> <p>b. IUCN Red List of Threatened Species</p> <p>c. Online Databases</p> <ul style="list-style-type: none"> • http://www.plantsystematics.org, • http://www.philippineplants.org, • http://www.kew.org/herbarium/keys/fm/key.html

6.3.4.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
Vegetation removal and loss of habitat.	<p>Identify and assess the specific impacts of the project activities guided by the following:</p> <p>i. Habitat Loss or Degradation- land clearing, etc. will result in the loss of habitat. Some activities may result in the alteration of habitat composition, structure of function. Some habitats are critical to ecological processes or endangered species.</p> <p>ii. Habitat Fragmentation- this is the break-up of the natural landscape into small patches isolated from one another. It affects the number of species present, movement of species, and transfer of</p>
Threat to the existence and/or loss of important species.	
Threat to abundance, frequency, and distribution of important species	
Hindrance to wildlife access	



	<p>materials among habitats.</p> <p>iii. Loss of Species-of special interest are keystone, endangered and endemic species.</p> <p>iv. Pollution Effect on Species- the stressors include dust, noise, chemical spills, erosion, increased temperature, etc.</p>
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6.3.4.4 Potential Impacts

Pre- Construction	Construction	Operation and Maintenance	Decommissioning
	<p>Loss of vegetation</p> <p>Habitat fragmentation</p> <p>Removal of economically and ecologically important species</p>	Habitat fragmentation	



6.3.5 Terrestrial Fauna

6.3.5.1 Definition

As a component of terrestrial ecology assessment, sampling for the assessment of terrestrial fauna focuses on the identification and assessment of the existing faunal assemblages in a given project site. As with floral survey, the accuracy of faunal survey relies heavily on the factors including visibility of faunal assemblage, type and state of habitats, animal behavior and distribution of habitat. This section will deal with various sampling methodology for terrestrial fauna with focus on bird, mammals, and herps.

6.3.5.2 Baseline Data

Primary Data	
Tools/Equipment Needed	<ul style="list-style-type: none"> ✓ GPS receiver with batteries and SD card ✓ Digital audio-recorder ✓ Digital SLR Camera with macro lens and close-up speed light, and zoom-lens ✓ 100-m wind-up meter tape ✓ 30-meter drift fence (thick black trash bags, stapler, staples, bamboo sticks) ✓ Plastic containers (ice cream tubs or 2-liter soda bottles and large scissors) ✓ Resealable (zip-lock) plastic bags (big and small sizes) ✓ Large thick plastic bags and clear packaging tape ✓ Plastic clip board, hard bound clip-binder and paper puncher for data sheets ✓ Indelible pen and Pencil (eraser/sharpener) and specimen tags ✓ Steel tape measure, steel foot ruler and thick twine (10m)
Procedure on how to collect	<p>Sampling For Herpetofauna</p> <p><u>Modified Strip Transect Sampling</u></p> <ul style="list-style-type: none"> ✓ Designate a 250-m strip transect in the selected sampling site. A strip transect represents an approximately straight line laid across the sampling site that can follow existing foot trails to minimize disturbance. ✓ Lay out alternating 10x10-m quadrats at every 25 m. These should be 5 m perpendicular to the transect. Mark each area with flagging tape.



	<ul style="list-style-type: none"> ✓ Establish ten (10) quadrats per site covering an area equivalent to 1,000 m². ✓ Record the GPS coordinates of the central point from each quadrat, along with two endpoints of the transect line. ✓ Take a photograph each quadrat. ✓ Traverse the transect by scanning through and making searches, especially for cryptic species, in potential microhabitats (e.g., streams, pools, tree holes, burrows, underneath fallen logs, under forest-floor litter, inside leaf axils of aroids, bananas or pandan/screw pines, etc.). ✓ Conduct sampling at least thrice a day between 0700h to 0900h, 1100h to 1300h, and 1900h to 2100h. This ensures sampling of diurnal and nocturnal herpetofauna, including mid-day active reptiles and post-crepuscular frogs and toads. ✓ Follow the auditory cues of frogs and hand capture each individual. ✓ Auditory cues can also be digitally recorded and used as a reference for species identification. ✓ Use bare hands and/ or forceps, snakes hooks/tongs and even wooden sticks to capture other amphibians and reptiles. ✓ Using the data sheet, record the species, number of individuals encountered and whether they were seen, heard or captured. ✓ Photograph and note the descriptions of their microhabitats and ecological or behavioral observations, if any. <p><u>Live-trapping</u></p> <ul style="list-style-type: none"> ✓ Lay out pit-fall traps and glue traps across the length of the designated central strip transect in each sampling site. ✓ Bury the plastic containers with the brim lower or about the same level as the ground (A). Space the traps five meters apart. ✓ Cover the trap with natural roofing material such as wooden bark, stone slates or large leaves braced 1-2 inches above the ground. Record the GPS coordinates for each trap. ✓ You may opt to add drift fences between traps using cut strips of black trash bags (stapled or attached with dark packaging tape) or prefabricated tarpaulin erected by wooden/bamboo stick. These will facilitate the movement of the animal into the pit-fall traps). ✓ Alternate traps every five meters on each side of the fence. Pitfall traps may also be set without drift fences.
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	<p>✓ Check the traps in the morning at around 0700 h and every other hour thereafter whenever possible until 1900 h, more so if heavy rainfall occurs to avoid captured individuals from drowning or escaping.</p> <p>✓ Staple or tack commercially available glue boards or fly paper onto tree trunks or large branches every five meters to capture small arboreal herpetofauna (as well as arthropods, which may also serve as bait).</p> <p>✓ Check these regularly to limit predation by other wildlife or ensure retrieval of live captures which can be removed and cleaned of glue using a mixture of dishwashing fluid and cooking oil.</p> <p><u>Purposive Sampling</u></p> <p>✓ Record amphibians or reptiles observed or caught outside of the strip transect sampling area (i.e., during net watching, checking of mist-nets and rebaiting of traps) but within the sampling site.</p> <p>✓ Collect the animals by hand or with the aid of handling equipment. Protective gear such as leather gloves, large forceps, dip nets, insect nets, snake hooks, noose and tongs will aid capture and facilitate safe handling.</p> <p>✓ Use dip nets to fish-out aquatic species such as frogs and tadpoles and reinforced insect nets to sweep for arboreal species.</p> <p>✓ Take extra precaution in handling monitor lizards and snakes, especially venomous snakes which must be handled using snake hooks with noose or snake tongs with rubberized clamps to minimize injury.</p> <p>✓ Use spades and trowels to dig out burrowing reptiles and handle them with tongs or forceps, or gloved hands.</p> <p>✓ Use rubber bands to immobilize and capture arboreal lizards through sling-stretching bands over a stick or fingers. Use a rubber band gun to collect voucher specimens only and not for individuals intended for release (McDairmid, 2012).</p> <p>Sampling for Avifauna</p> <p><u>Transect Survey</u></p> <p>Standard line transects are established with routes measuring .5 to 2.0 kilometers. Each transect route are traversed by one observer traveling by foot at the speed of 15 minutes for every 250 meters of the transect line.</p>
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	<p>✓ Observations of transect counts of birds are employed for a minimum of 30-40 man-hours of observation time per site.</p> <p>✓ Observers record the following information/ parameter in a standard data sheet:</p> <ol style="list-style-type: none"> 1. species name 2. number of individuals, 3. perpendicular distance from the transect line (if possible), 4. type of habitat 5. elevation, 6. strata/vertical distance from the ground and other remarks (seen or heard or flying, perched, participation in mixed feeding parties, call, foraging behavior, seen singly, in pairs or in a flock). <p>✓ Transect counts are done several times a day especially during early morning, (5:30 am to 10:00 am) and late afternoon (3:00 pm to 6:30 pm), thus completing a total of 40 hours of transect counts for each site.</p> <p>✓ Each species recorded during the transect counts are included for the computation of Bird Species Diversity (BSD), Bird species richness (BSR), Bird species density (P), Equitability or Even Index (e = Peilou's formula, 1966) to determine the avifaunal composition of the study area.</p> <p><u>Mist Netting</u></p> <p>Mist-nets are used to catch volant vertebrates such as birds and bats. It is composed of average mesh size of 36 mm and an average height of 2.5 meters in three lengths (6.0, 12.0 and 18.0 meters).</p> <p>✓ Mist-netting stations composed of 15-25 nets (or 150-250 meters) are set-up in each site and operated for 3-5 consecutive nights and days.</p> <p>✓ Nets are kept open during the daytime (5:00 am to 6:00 pm) to catch birds (net-day) and left open at night (6:00 pm to 5:00 am) to capture nocturnal birds and bats.</p> <p>✓ Nets are set 2-3 meters high (as ground nets) while the bottom edges of the net are generally around a meter above the ground.</p> <p>✓ Mistnets are strategically placed along the tops of ridges, near cliffs and in patches of thick forest growth with possible flyways of understorey birds and bats.</p> <p>✓ Occasionally sky nets are hoisted up with a pulley and some nylon rope on top tall tree trunks at a height of about 10-30 meters to capture upper canopy species.</p>
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	<p>✓ Nets are checked for captured birds every two hours (except during rainy days where it is checked more often) from sunrise to late afternoon.</p> <p>✓ Nets are guarded for insectivorous bats (net-watching) from 6:00 to 8:00 p.m. and are checked again at 10:00 p.m., as well as 5:00 a.m. the next day.</p> <p>✓ Netted animals are carefully removed from the nets and placed in cloth bags to minimize stress prior to processing.</p> <p>Sampling for Non-Volant Mammals</p> <p>✓ Traps are baited with either live annelid earthworms individually tied to the traps or pieces of freshly steamed coconut meat coated with peanut butter, as well as occasional viands of fish/meat.</p> <p>✓ Most traps are set on the ground (80-90%), often along runways, near holes or among root tangles. Traps are spaced at 5 to 10 meters intervals, while some of traps are strategically placed on tree branches along possible pathways for arboreal species.</p> <p>✓ Position of the trap and condition of the microhabitat are noted.</p> <p>✓ Traps are rebaited twice each day - during early morning and late afternoon. One trap-night is equivalent to one trap set for one night. An average of 300-400 trap-nights is set per study site.</p> <p>✓ Captured animals are identified up to the species level if possible.</p> <p>✓ The body measurements and weight are taken using a measuring tape/foot ruler/ dial calipers and Pesola spring scales, respectively and recorded on standard field catalogues.</p> <p>✓ Other basic information is also noted in a field catalogue sheet, i.e., sex, age, habitat, present reproductive conditions, etc.</p> <p>✓ Animals captured are marked and released except for voucher specimens of probable new records whose identification needs further verification in the laboratory (i.e., examination of cranial features and its measurements).</p> <p>✓ Species richness, abundance, etc. are determined by the standard number of animals captured per 100 trap-nights (trapping success).</p>
Reference	FMB Technical Bulletin 16-A



	DENR DAO 2019-09 Updated National List of Threatened Fauna
Applicable Annexes	

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
i. Updated National List of Threatened Fauna and their Categories ii. IUCN Red List of Threatened Species	a. DENR DAO 2019-09 b. IUCN Red List of Threatened Species

6.3.5.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
Vegetation removal and loss of habitat.	Identify and assess the specific impacts of the project activities guided by the following: <ul style="list-style-type: none"> i. Habitat Loss or Degradation- land clearing, etc. will result in the loss of habitat. Some activities may result in the alteration of habitat composition, structure of function. Some habitats are critical to ecological processes or endangered species. ii. Habitat Fragmentation- this is the break-up of the natural landscape into small patches isolated from one another. It affects the number of species present, movement of species, and transfer of materials among habitats. iii. Loss of Species-of special interest are keystone, endangered and endemic species. iv. Pollution Effect on Species- the stressors include dust, noise, chemical spills, erosion, increased temperature, etc.
Threat to the existence and/or loss of important species.	
Threat to abundance, frequency, and distribution of important species	
Hindrance to wildlife access	

6.3.5.4 Potential Impacts

Pre- Construction	Construction	Operation and Maintenance	Decommissioning
	Habitat fragmentation Removal of economically and ecologically important species	Habitat fragmentation	



6.4 The Water Component

6.4.1 Hydrology

6.4.1.1 Definition

Hydrology is the science that encompasses the occurrence, distribution, movement and properties of the waters of the earth and their relationship with the environment within each phase of the hydrologic cycle. The water cycle, or hydrologic cycle, is a continuous process by which water is purified by evaporation and transported from the earth's surface (including the oceans) to the atmosphere and back to the land and oceans. All of the physical, chemical and biological processes involving water as it travels its various paths in the atmosphere, over and beneath the earth's surface and through growing plants, are of interest to those who study the hydrologic cycle

6.4.1.2 Baseline Data

Primary Data	
Tools/Equipment Needed	<ul style="list-style-type: none"> • Meter stick (for depth measurements) • Current meter/float • Flow-measuring bobber/20-meter nylon line or rope • Measuring tape • Calculator • Stopwatch
Procedure on how to collect	<p><u>Flow Measurement</u></p> <p>Stream flow or discharge is the volume of water that moves over a designated point over a fixed period of time. It is often expressed as cubic meter per second (m³/s). The flow of a stream is directly related to the amount of water moving off the watershed into the stream channel.</p> <p>Stream flow measurement is required in stream quality monitoring for the computation of mass flow or mass balance of the different water quality parameters.</p> <p><u>Velocity-Area Method</u></p> <p>This method involves the measurement of the area of the cross section of a river and the mean velocity of water flowing through it, discharge is the product of the two measurements. The area of the cross section is determined by means of soundings at a number of verticals on a cross section and measurement of distance of these verticals from a reference point on the bank. Velocity is determined using a current meter,</p> <p>If the stream current velocity is high, the meter will not hang vertically below the point of suspension but will be carried downstream by the current. This will result to longer line paid out than the true vertical depth and the meter is higher than indicated. If the angle between the line and the vertical is about 120°, the error will be about 2%. Wherever possible, bridges are used as the measuring station.</p>



	<p>To get accurate stream discharge estimates, measurements should be made from a bridge, culvert or other structure.</p> <p>(a) Mark off the bridge or culvert crossing the stream in meter, before beginning the discharge measurement.</p> <p>(b) Put the current meter, hang cable, and bridge sampler together. Lower the raising nut on the current meter shaft from the traveling position to the bottom or measuring position.</p> <p>(c) Record the beginning staff gauge measurement from the benchmark. (Each site should have a permanent benchmark from which levels of streams are recorded).</p> <p>(d) At the first current velocity measurement increment, 0.1m away from the initial or zero starting point at the water's edge, lower the current meter and weight by letting out the hang cable until the weight touches the water surface.</p> <p>(e) Set this as the zero on the bridge sampler cable meter or record the level of the hang cable at the top of the bridge.</p> <p>(f) Lower the meter until the weight hits the stream bottom and record the depth in the depth column on the stream gauge/discharge measurement form.</p> <p>(g) If the depth is greater than 1m., calculate the 0.2 depth and the 0.8 depth measurements.</p> <p>(h) Lower the current meter to 0.8 of total stream depth on the cable meter. Start the stopwatch and count the number of revolutions of the current meter, ticks in the headphones, for a time period between 40 and 70 seconds.</p> <p>Note: The current velocity equation is $V = 2.2172R + 0.0267$, where R = revolutions/second, for calculating velocity. This equation is valid for measurements involving 5 or more revolutions counted over the 40 to 70 second measuring period.</p> <p>(i) Record the number of revolutions and measurement time in seconds on the Stream Gauge/Discharge Measurement form.</p> <p>(j) Set the meter at the 0.2 of total stream depth and repeat steps (h) and (i).</p> <p>(k) Repeat steps (d) – (j) for each 0.1m increment on the bridge or culvert.</p> <p>(l) Make sure the hub is raised off the needle bearing anytime the velocity meter is not being used.</p> <p>(m) Complete all calculations at the end of the stream flow measurement, while personnel are still on site.</p>
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(n) At the end of each day the current meter must be cleaned, dried, and oiled according to the standard operating procedures for the meter.

Float Method

One simple method of estimating flow in a specific area or reach of a stream is the float method. It uses a float (any object that floats, e.g., guava, santol, orange, ping-pong ball, pinecone, etc.) to measure stream velocity. Flow is calculated by the equation:

$$\text{Flow} = \text{ALC}/\text{T}$$

Where:

A = Average cross-sectional area of the stream width multiplied by average water depth

L = Length of the stream reach measured

C = A coefficient or correction factor (0.8 for rocky-bottom streams or 0.9 for muddy-bottom streams). This allows for correction for the fact that water at the surface travels faster than that near the stream bottom due to resistance from gravel, cobble, etc. Multiplying the surface velocity by a correction coefficient decreases the value and gives a better measure of the stream's overall velocity. (0.85 is commonly used if there is uncertainty in the uniformity of stream bottom surface)

T = Time, in seconds, for the float to travel the length of L

Procedure

(a) Select a stretch of stream at least 6m long. This will represent L in the formula.

(b) Make a transect line across the stream perpendicular to the shore using the string and stakes. Make sure the string is taut and near the water surface. The upstream transect is Transect #1, the transect located 6m downstream would be Transect #2.

(c) Calculate the average cross-sectional area. Cross sectional area, A, is the product of a stream width multiplied by the average water depth. To calculate the average cross-sectional area for the stream reach, determine the cross-sectional area for each transect, add the results together and divide by 2.

To measure the cross-sectional area:

(i) Determine the average transect depth by marking off equal intervals along the string with the twist ties. The intervals can be one-fourth, one-half, and three-fourths of the distance



	<p>across the stream. Measure the water's depth at each interval point. To calculate average depth for each transect, divide the total of the three depth measurements by 4. (Divide by 4 instead of 3 because the 0 depths that occur at the shores have to be accounted for.)</p> <p>(ii) Determine the width of each transect by measuring the distance from shoreline to shoreline. Simply add together all the interval widths for each transect to determine its width.</p> <p>(iii) Calculate the cross-sectional area of each transect by multiplying width times average depth.</p> <p>(iv) To determine the average cross-sectional area of the entire stream reach (A in the formula), add together the average cross-sectional area of each transect and then divide by 2.</p> <p>(d) Measure travel time with a stopwatch, determine the time it takes for an orange (or some other object) to float from the upstream to the downstream transect. An orange is a good object to use because it has enough buoyancy to float just below the water surface. It is at this position that maximum velocity typically occurs. The person who releases the orange at the upstream transect should position it so it flows into the fastest current. The clock stops when the orange passes fully under the downstream transect line. Once under the transect line, the orange can be scooped out of the water. This "time of travel" measurement should be conducted at least three times and the results averaged--the more trials, the more accurate your results will be. The averaged results are equal to T in the formula. It is a good idea to float the orange at different distances from the bank to get various velocity estimates. Discard any float trials if the object gets hung up in the stream (by cobbles, roots, debris, etc.).</p> <p>(e) Record measurements on the data form and calculate flow.</p>
Reference	FMB Technical Bulletin 16-A
Applicable Annexes	

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
<ul style="list-style-type: none"> i. Drainage map (also showing local drainage system/infrastructures), ii. Historical flooding/drought occurrences, stream flow data (waterworks, gage height, and discharge measurement) 	<ul style="list-style-type: none"> a. National Water Resources Board for groundwater resources b. DENR for watershed delineation c. MGB and PAGASA for historical flooding and drought d. PAGASA for rainfall and climate data e. DPWH for streamflow measurements



iii. Delineation of watershed /sub-watersheds/ floodplain (topographic and contour maps), iv. Identification of aquifers, if any, v. Regional hydrogeological map, and vi. Current / projected water use (groundwater/surface water) in the area and adjacent areas hydrogeological map. vii. Rainfall Data viii. Location of proposed structure	
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6.4.1.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
Change in drainage morphology / Inducement of flooding/ Reduction in stream volumetric flow	Identify and assess project impacts in terms of change in drainage morphology/local drainage system and the resulting effects on flooding pattern in the project area. Consider extreme weather conditions and the PAG-ASA climate projections.
Change in stream, lake water depth	Identify and assess project impacts in terms change in stream and lake water depth, if any.
Depletion of water resources / competition in water use	For project with significant water requirement, conduct water balance / budget analysis.

6.4.1.4 Potential Impacts

Pre- Construction	Construction	Operation and Maintenance	Decommissioning
	Change in water body depth and width		



6.4.2 Oceanography

6.4.2.1 Definition

Oceanography is the study of the physical, chemical, and biological features of the ocean, including the ocean's ancient history, its current condition, and its future. In the context of PEISS, this module focuses on the project's physical aspect including changes in water circulation, water currents and sediment deposition as a result of project implementation.

6.4.2.2 Baseline Data

Primary Data	
Tools/Equipment Needed	Hydrodynamic Modelling software Tilt Current Meter Accelerometer Drogue Secchi Disk
Procedure on how to collect	<p>Tidal Data</p> <p>Tidal datum should be based on 20-year period, as indicated by the National Oceanic and Atmospheric Administration (NOAA) (https://tidesandcurrents.noaa.gov/). This is to cover the “periodic and apparent secular trends in sea level”. The list of datum planes of primary tide stations in the Philippines as published by NAMRIA (2020) were also based on 20 years of data.</p> <p>Generate the hourly plots of water levels and statistical values (minimum, maximum, and range)</p> <p>Surface Current Measurement</p> <p>Use tilt current meter to measure current speed and direction simultaneously</p> <p>The principle of current measurement using the drag-tilt technology wherein the amount of tilt or tilt angle was proportional to the speed of the water, which was recorded using an accelerometer. The tilt direction determined the current direction using a magnetometer. The tilt angles and the tilt directions were converted to current speeds and directions by a software using pre-defined tilt-to-speed calibration curves.</p> <p>Bathymetric data from the NAMRIA and based on site survey will be consolidated to form the bathymetry or bottom elevations of the modelling domain or computational grid.</p> <p>Meteorological data (wind speed and wind direction) from a nearby prognostic meteorological station, which was derived using</p>



	MM5 regional meteorological model, will also be used to represent simulations with time series of water levels during northeast and southwest monsoon seasons
Reference	
Applicable Annexes	

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
<ul style="list-style-type: none"> i. Bathymetric survey and map, ii. Measurement of water currents, iii. Analysis of available proximate tides data, iv. Hydrodynamic modeling, v. Particle dispersion modeling and map, and vi. Storm surge hazard, exposure, vulnerability, risk maps 	<ul style="list-style-type: none"> a. NAMRIA for the Tidal Data b. MGB PHIVOLCS and PAGASA for hazard maps

6.4.2.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
i. Change in circulation pattern	<p>Identify and assess project impact on the degree of change/disruption of circulation pattern and the potential for coastal erosion.</p> <p>Build a hydrodynamic model based on the measured bathymetry and currents and tidal analysis and then validate the model. Using the generated model, assess the project's impact on water circulation, littoral current, and coastal erosion and deposition. Discuss how the impacts may be affected by climate change.</p>
ii. Change in bathymetry	<p>Use the Universal Soil Loss Equation or similar modelling when applicable</p> <p>Use the hydrodynamic model to assess the impacts of the project on bathymetric changes. Discuss how the impacts may be affected by climate change. Compare projected new</p>



	bathymetry as a result of the project with the existing.
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6.4.2.4 Potential Impacts

Pre- Construction	Construction	Operation and Maintenance	Decommissioning
	<p>Change in water circulation resulting in changes/effects on marine life.</p> <p>Change in sediment deposition resulting to disruption of water flow and effects on marine life.</p>		



6.4.3 Water Quality

6.4.3.1 Definition

As defined by Republic Act 9275 (Clean Water Act) water quality refers to the characteristics of water which define its use in terms of physical, chemical, biological, bacteriological or radiological characteristics by which the acceptability of water is evaluated. This definition implies that there is no singular measure of good water quality. While it can be agreed generally that water of good quality should be clear and free from harmful substances, presence of certain concentrations of such substances is acceptable provided those are within the water quality guideline values corresponding to the beneficial uses of the water.

Water quality guidelines on the other hand refers to the level for a water constituent or numerical values of physical, chemical, biological and bacteriological or radiological parameters which are used to classify water resources and their use, which does not result in significant health risk and which are not intended for direct enforcement but only for water quality management purposes, such as determining time trends, evaluating stages of deterioration or enhancement of the water quality, and as basis for taking positive action in preventing, controlling or abating water pollution.

6.4.3.2 Baseline Data

Primary Data	
Tools/Equipment Needed	GPS Project Area Map Sampling Bottles (depending on the parameters to be measured) <ul style="list-style-type: none"> - 1L plastic containers - Clear glass container with foil for oil and grease - Amber glass for coliform sampling - Wide mouth bottles Water Quality Checker Ice chests Packaging materials Labelling materials
Procedure on how to collect	Rivers and Streams Sampling Stations In rivers, sampling stations are often identified in terms of distance or number of kilometers the station is upstream from the river mouth. Stationing should start from the mouth going upstream (1) Points immediately before the inflow of river or stream into a marine water body (2) Points along the main river; (a) downstream of confluence and (b) upstream of the confluence with tributaries or drainage channels that may greatly affect the water quality. Select areas with the greatest degree of cross-sectional homogeneity. Sites immediately upstream or downstream from the confluence of two streams or rivers should generally be avoided because the flow from two tributaries may not immediately mix and can produce backflow that can upset the depositional flow patterns. (3) Points in the tributaries or drainage channel immediately before the confluence with the main or a major river (4) At areas of public use for water contact recreation (e.g., swimming areas) (5) Points along the river where there is a marked transition in topography such as where a waterfall occurs; (a) upstream of the waterfall, and (b) downstream at a point where mixing has already occurred (6) Points immediately before the inflow of the river or stream into a lake, marsh or reservoir



- (7) At habitat areas of sensitive species (e.g., spawning areas important to fresh water fishes)
- (8) Variability of flow patterns caused by artificial physical structures such as dams, weirs, and wing walls must be considered in sampling site selection. These structures may influence the representative quality of the water. Samples should be taken (a) upstream of the structure and (b) downstream of the structure.
- (9) Tributaries should be sampled as near the mouth of the tributary as possible. Care should be exercised to avoid collecting water samples from stratified locations, which are due to differences in density resulting from temperature, dissolved solids, or turbidity.
- (10) Where there is suspected point (e.g., wastewater treatment plants) and non-point (e.g., feedlots) pollution sources; (a) upstream of the discharge point and (b) downstream of the discharge point.
- (11) Generally, for small streams less than 20 feet wide, a sampling site should be selected where the water is well mixed. In such cases, a single grab sample taken at mid-depth at the center of the channel is adequate to represent the entire cross-section.
- (12) When several locations along a stream reach are to be sampled, they should be strategically located:
- At intervals based on time-of-water-travel, not distance.
 - At the same location, if possible, when the data to be collected will be compared to a previous study.
 - Whenever a marked physical change occurs in the stream channel.
 - To isolate major discharges, as well as major tributaries
- (13) There should be at least three sampling sites for each classified section of the river, but more monitoring stations may be established as necessary. If a very long stretch of the river has only one classification, at least three monitoring sites should be established; one each at the downstream, midstream and upstream sections or one monitoring station for every 5 kilometers may be designated. Samples may be taken at any accessible point representing each river section.

Sampling Depth

In shallow rivers and streams (<2.5meters) one grab sample collected from the center of the stream can be considered representative of the river or stream water quality.

In deeper waters (>2.5 meters) depth integrated sample can better represent the river or stream water quality. If it is judged that saline or thermal stratification occurs, a minimum of two samples should be collected, one from the surface and another approximately 0.5 m from the bottom. Water samples may also be collected from the top, middle and bottom of the water column.

Where the river is wide and it is judged that there is a big difference in water quality between the left and right banks, samples can also be taken from the left and right banks, at a point representative of the water quality of the river.

Refrain from taking samples at or near man-made structures (e.g., dams, weirs) as the samples may not provide representative data because of unnatural flow patterns, unless necessary for specific studies.

Sampling Point and Depth in Lakes, Ponds and Similar Water Bodies

In ponds, small impoundments and small lakes where the depth is less than 4m, a single vertical composite at the deepest point where oxygen deficit is likely to be greatest should be sufficient, unless the salinity profile indicates the presence of a halocline (salinity stratification). In such case, samples should be collected from each stratum.

For depths between 4m and 8m, collect one sample from the surface (between 0.1m to 0.5 m) and one sample approximately 0.5m from the bottom. For much deeper lakes, water samples can be collected at increments of three (3) meters using a Van Dorn (or similar type) horizontal sampler.



	<p><u>Sampling Point and Depth in Coastal Waters</u></p> <p>The monitoring sites at beaches should be representative of the complete bathing beach area. For beaches less than one kilometer in length, three monitoring sites per beach may be sufficient. For beaches that are more than one (1) km long more sampling sites may be needed. They would normally be spaced 300 meters apart and fixed permanently for the season.</p> <p>If there are freshwater inflow sources to the coastal areas, monitoring stations should also be established near the outlet of such sources.</p> <p>For regular beach monitoring, samples are usually taken within locations representative of the common bathing areas. Surface grab sampling is appropriate in areas where the depth is less than 4m. Samples for fecal coliform bacteria may be collected just below the surface (0.1-m). In offshore areas with depth of between 4m to 10m, one sample can be taken at the surface (0.10m-0.50m), one (1) at the middle layer and one at near-bottom depth (0.5-1 m above the seabed). In much deeper areas, samples can be collected at depth increments of 5m using a Kemmerer or Van Dorn sample</p> <p><u>Sampling Methods</u></p> <p><u>Grab Sampling</u></p> <p>Sampling may be done using the sample container which may be a wide-mouthed glass, plastic container, BOD bottle or vial with cover. This sampling method is appropriate when:</p> <ul style="list-style-type: none"> • sampling wadable waters • the water sample will be collected only from the surface • the sample to be brought to the laboratory does not require filtration <p><u>Sampling Procedure</u></p> <p>Direct Sampling with the Sample Container</p> <ol style="list-style-type: none"> (1) Put on protective gloves and wading boots. (2) Wade into the water to the center of the river channel where the water is deepest and current has the greatest velocity. Face upstream and wait until the plume of sediment has been carried away or has settled. (3) Rinse the container at least three times with the river water, throwing the used water downstream of the sampling location. (4) Lower the sample container into the water face down. Hold it with one hand on each side to a depth at least 4 inches below the surface or halfway to the bottom of the stream. Do not touch the inner part of the container. If the stream is very shallow, lower to a depth just above the stream bed but do not touch or disturb the stream bed with the container. (5) Slowly lift the container towards the flow. Fill it to about 4/5 full. Enough space should be left to allow for addition of preservative, if necessary, and to allow for mixing the sample. (6) Cap or cover the container and bring the sample to the working area for the succeeding steps. <p><u>Chain of Custody of Samples</u></p> <p>Whenever project personnel collect water sample for analysis, all associated field data and descriptive information must be recorded on the Field Data Form. This form must be completely filled out. All field and laboratory generated samples and data must be handled in an orderly and consistent manner so as not to compromise their integrity. This procedure is termed sample and/or data chain of custody. Chain of custody (COC) is defined as the unbroken trail of accountability that ensures the physical security of samples, data and records</p> <p>For each set of samples, including duplicate and blank samples submitted to the laboratory for analysis the sample collector must fill out and submit a COC form from the laboratory. The COC must contain information on the project, the station, the date and time when the sample was collected and the parameters for analysis. Each sample submitted for analysis must have the appropriate</p>
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	<p>label. Upon receipt of the sample(s) submitted, the laboratory personnel should check the sample labels against the information written on the form. If there are any discrepancies the laboratory should inform the sample collector or the organization's quality assurance representative.</p> <p>The laboratory then assigns a log number to the set of samples and returns a copy of the form to the sample collector or authorized personnel of the monitoring agency. The original copy is kept by the laboratory for their records.</p> <p><u>Prevention of Sample Contamination</u></p> <p>The quality of data generated in a laboratory depends primarily on the integrity of the samples that arrive at the laboratory. Consequently, the field personnel must take the necessary precautions to protect samples from contamination and deterioration. There are many sources of sample contamination. The following are some basic precautions to be observed:</p> <ol style="list-style-type: none"> (1) Field measurements should always be made on site or on a separate sub-sample which is then discarded. They should never be done on the water sample to be submitted to the analytical laboratory. (2) Sample container, new or used, must be cleaned according to the recommended methods. (3) Only the recommended type of sample container for each parameter should be used. (4) Water sample containers should be employed for water samples only. Containers that have been used in the laboratory to store concentrated reagents should never be used as sample containers. (5) Preservatives should be freshly prepared and dispensed with using clean glassware. (6) Recommended preservation methods must be followed. When preserving samples, the possibility of adding the wrong preservative to a sample or cross-contamination of the preservative stocks should be minimized by preserving, in one operation, all the samples for a particular parameter. (7) The inner part of sample containers and caps should not be touched with bare hands, gloves, mitts, etc. Do not put anything in the sample bottle except the water sample and recommended preservatives. (8) Sample containers must be kept in a clean location, away from dust, dirt, fumes and grime. Vehicle cleanliness is important minimize contamination. (9) Sample containers which have been sterilized for microbiological sampling must remain sterile until the sample is collected. If the sterile heavy-duty paper or aluminum foil has been lost or if the top seal has been broken, do not use the bottle. (10) All foreign objects, especially metal objects must be kept out of contact with preservatives and water samples. (11) Specific conductance should never be measured in sample water that had earlier been used for pH measurements. Potassium chloride diffusing from the pH probe alters the conductivity of the sample. (12) Samples must never be left to stand in the sun; they should be stored in a cool, dark place; ice chests are recommended. Keep the empty bottles in the coolers for additional cleanliness. (13) Samples must be submitted to the laboratory as promptly as possible. The sample must reach the laboratory early enough such that the recommended holding time for the parameter to be analyzed is not exceeded, taking into account the necessary preparatory activities prior to laboratory analysis. (14) All sampling instrument, equipment, containers, supplies and materials to be used in sampling should <p><u>Labelling of Water Samples</u></p> <p>Each sample for laboratory analysis must have a label to properly identify it. Label format can be prepared in the office beforehand and filled out in the field after the sample has been collected. It must be ensured that labels are waterproof and will not be damaged if stored in the ice cooler or during transport and storage.</p> <p>If waterproof labels are not available, alternatively, the sample container can be marked indicating the water body being monitored, the sampling station and</p>
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	<p>the sample number. In addition, the label format should also be filled out. The information indicated in the sample container should also be indicated in the label format to facilitate identification when it reaches the laboratory. The filled-out label form should be pasted on the sample container before submitting the sample to the laboratory.</p> <p>Care must be taken to ensure that the label will not be damaged by water or chemical spillage during handling and transport. Use a permanent ink marker and a waterproof label.</p>
Reference	<p>EMB Water Quality Monitoring Manual Volume 1</p> <p>DENR DAO 2016-08 Water Quality Guidelines and General Effluent Standard</p> <p>DENR DAO 2016-21 Updated WQG and GES for Selected Parameters</p>
Applicable Annexes	Annex 6-1

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
i. Other water quality study conducted in the project area.	a. Environmental Management Bureau Water Quality Monitoring

6.4.3.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
Degradation of groundwater quality	<p>Identify and assess project impacts in terms of degradation of ground water, surface water and coastal/marine water quality.</p> <p>Assess impact of siltation on surface and marine waters.</p> <p>Compare results with DENR Water Quality Guidelines.</p>
Degradation of surface water quality	
Degradation of coastal/marine water quality	

6.4.3.4 Potential Impacts

Pre-Construction	Construction	Operation and Maintenance	Decommissioning
Water contamination as a result of spills and accidents	Water contamination as a result of spills and accidents	Water contamination as a result of spills and accidents	
Increased generation of domestic wastewater	Increased generation of domestic wastewater	Increased generation of domestic wastewater	
	Competition in water use		



6.4.4 Freshwater Ecology

6.4.4.1 Definition

Freshwater ecology is the study of the structural and functional interrelationships of organisms of fresh waters as they are affected by their dynamic physical, chemical, and biotic environments.

6.4.4.2 Baseline Data

Primary Data	
Tools/Equipment Needed	
Procedure on how to collect	<p>Phytoplankton</p> <p><u>Preparation of Sampling Bottles</u></p> <ol style="list-style-type: none"> 1. Get a 4- to 5-m long bamboo pole or 1" X 1" wide wooden stick. 2. Mark off with a masking tape every 10-cm distance on the stick beginning at the tip. 3. Obtain two ring loops. Fasten on ring loop halfway down the length of the pole. Do the same to the other ring loop about one-foot distance from the tip of the pole. 4. Get a clean 1-L bottle. Tie this in vertical position with a 1-cm wide rubber strip, the opening directed upwards. 5. Obtain the correct size rubber plug that fits into the bottle mouth. Bore a vertical hole into the plug. 6. Get a 6-m nylon string and insert this through the two ring loops. Insert the string's lower end through the hole in the plug. Make a knot at the narrow side of the plug. Insert it into the mouth of the bottle and the sampling bottle is ready for use <p><u>Collection of Phytoplankton</u></p> <ol style="list-style-type: none"> 1. Lake <p>For a lake less than 30 hectares in area, locate the three replicate primary stations for long-term monitoring towards the center. As to the secondary stations, identify the location of the source of stress in consultation with the fisheries group. Each station should have three replicate areas. Record the GPS readings at your sampling points.</p> <ol style="list-style-type: none"> a. At the sampling station, rinse 3 times with lake river water a 1-L sampling bottle. Cap the bottle. After the final rinse, move away to an undisturbed area in the station. b. Dip sampling bottle into the water at the Secchi depth determined by the physico-chemical team. Pull the string to unplug the bottle and wait for the bubbling to stop which indicates that the bottle is full. Pull the sampler out of the water. c. Pour out the collected water sample through the collecting chamber of a plankton net. Gently tilt and swirl the chamber as the water goes down



	<p>adhering algae. (Note: If your net has a 30 μm mesh size, only those algal cells or thalli with size larger than this will be retained by the net).</p> <p>d. Before all the water is emptied, prepare a clean 30-ml vial with screw cap and collect about 20-ml of filtered algal suspension dripping from the net.</p> <p>e. Add a drop of Lugol's iodine. Replace cap. Label the vial and place sample in ice placed inside an ice box for transport</p> <p>f. Repeat the procedure at the two other replicate areas of the station</p> <p>2. River</p> <p>a. Choose a stream segment that is at least half a meter deep. Take your position in the middle of the stream.</p> <p>b. Hold the plankton net chamber with one hand and the mouth or orifice with the other hand. Lower the mouth of the net in a vertical position until this is completely underwater vertically. See that the chamber is extended and not crumpled on the stream bed. Hold the net in this position for two minutes.</p> <p>c. Take the net out of the water allowing the trapped water to flow into and collect inside the net's chamber.</p> <p>d. When the volume of the algal concentrate inside the chamber is about 20 ml, transfer this to a clean vial, and add a drop of Lugol's iodine, screw on the cap and label.</p> <p>e. Cool the algal suspension in a cooler with ice for transport.</p> <p>f. Repeat the procedure at the two other replicate areas of the station.</p> <p>Benthic Macro-invertebrates</p> <p>Procedure</p> <p>✓ Locate the upstream, midstream, and downstream sections of the river using GPS.</p> <p>✓ A 100 m reach representative of the characteristics of the stream should be selected. Whenever possible, the area should be at least 100 meters upstream from any road or bridge crossing to minimize its effect on stream velocity, depth, and overall habitat quality.</p> <p>✓ The kick net is placed downstream of the collector, flat side of the triangle resting on the substrate of the stream. The collector walks backward, away from the net, kicking the substrate to disturb it to a depth of ~5 cm. For large boulders, the net is held downstream while the boulder is brushed by hand. The net is held near to the area being disturbed so the current will carry dislodged animals into it</p> <p>✓ The collector zigzags over the stream bottom from bank to bank in an upstream direction for a timed period (e.g., 2-5 min). Standard time collections (e.g., 3 min) allow comparisons among sites. The zig-zag coverage allows collection of invertebrates from a variety of stream habitats (pools, riffles, runs, etc.). It is important that sampling be extended directly</p>
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	<p>adjacent to the stream bank because this region may have aquatic macrophytes that support a unique fauna.</p> <p>✓ The jabs or kicks collected from different locations in the cobble substrate will be composited to obtain a single homogeneous sample.</p> <p>✓ Transfer the sample from the net to sample container(s) and preserve in 80% percent ethanol to cover the sample. Forceps may be needed to remove organisms from the net. Place a label indicating the sample identification code or lot number, date, stream name, sampling location, and collector name into the sample container.</p> <p>✓ Count and record the number of individuals of each group. Record your results on the Benthic Macro-invertebrate Data Sheet.</p> <p>Aquatic Macrophytes</p> <p>Aquatic macrophytes refer to large aquatic plants which include mosses, liverworts, larger algae, as well as vascular plants. Aquatic macrophytes in the wetland ecosystem serve as soil stabilizer, as components of nutrient cycling, agents of water purification, and as source of food for terrestrial organisms, e.g., cattle feed.</p> <p>Though aquatic macrophytes are an integral part of the natural ecosystem, they can seriously interfere with water use and become noxious where too abundant. Some of the problems associated with dense infestation involve suppression of growth of desirable plants, the creation of favorable habitat for growth and development of disease-carrying organisms, promotion of too much water loss via evapotranspiration, interference with fish harvesting, and also pose socio-economic limits to area development.</p> <p>Species Composition</p> <ol style="list-style-type: none"> 1. Record all common names of plant species occurring opposite every mark along the entire length of the transect line. 2. Take note of the following: distribution pattern of a remarkable species together with the extent of its areal coverage, disturbances around the area and other important or relevant information. 3. In the office or laboratory, supply the scientific names and family names of the plants in your list. Refer to the tips on how to know the correct scientific name of a plant species. <p>Frequency of Occurrence</p> <ol style="list-style-type: none"> 1. Compute for the frequency of occurrence of each species listed to get a measure of its quantitative importance i.e., whether dominant or not. 2. Count the number of times a species occurs along the transect line. The value, Frequency Count (FC) is always 1 even if there are many individuals of a species at an interval.
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3. Compute for the Frequency Value (FV) of each listed species by dividing its FC by the total number of intervals, that is 10.
4. Finally, compute for the Relative Frequency (RF) by dividing the FV of a species by the Total FV (TFV), and then multiply by 100.
5. Note the top 5 dominant species for each transect.
6. Compute for the Average RF (ARF) for a species at a station. Sum up all the RF per species in all three sub-stations, and then divide by the total number of transects to get the ARF for a station. Then note the top 5 dominant species for a station. Do the same for the rest of the stations set up in the wetland under observation.
7. Tabulate the ARF of a species for all other sub-stations in the body of water under observation.

Assessment of Fisheries

Fisheries Inventory

1. The Fisheries Inventory will be conducted by one data analyst and two enumerators. They must undergo orientation and training on how to conduct the survey and fill out the survey forms.
2. A Focused Group Discussion (FGD) should be done to collect secondary data on fisheries from the local government offices (barangay, municipal, and provincial) such as the Agriculture Office, Environment and Natural Resources Office, and the Planning and Development Office of both the municipal and provincial levels, research institutions (government and private), tertiary education institution), non-government institutions (NGOs), and people organizations (POs). The enumerators should collect the data before the actual fisheries inventory survey starts.
3. The secondary data collected should be collated and encoded and then designated as the Baseline Data for the year of collection.
4. After the secondary data collection, the enumerators should proceed to conduct the fisheries inventory in all barangays. All information called for in the survey forms must be supplied.
5. A complete enumeration of fisherfolk engaged in capture fisheries and aquaculture, fishing gear and boat in all barangays should be done once a year.
6. Collate all survey forms, encode data in Excel format and make a Fisheries Inventory Report.

Fisheries Resource Mapping

1. This activity should be done through the participatory approach and by focused group discussions (FGD). The participants of the activity should be the representatives of all barangays from different sectors (fisherfolk, local government units or LGUs, people's organizations (POs), women, senior citizens, youth, NGOs, tertiary education institutions, and GOs).



	<p>2. Assign a Moderator to facilitate the activity. At the start, he/she should describe the purpose and the scope of the mapping exercise to be undertaken.</p> <p>3. The moderator shall present the objectives as follows:</p> <ol style="list-style-type: none"> to identify and map out the fishery resources of the freshwater wetland and classify these as follows: endemic, introduced, invasive alien, and threatened species taking care to indicate their place of occurrence and habitat in the map. to identify, quantify and locate the boat and gear. to identify and locate different habitats. to determine the resource uses and their locations; and to identify the issues and threats to fisheries biodiversity indicating in the map their specific area(s) of coverage. <p>4. The Moderator shall explain the following resources or features that the group needs to map out:</p> <ol style="list-style-type: none"> fisheries resources, endemic, threatened, introduced, alien species. fishing boats and gear and effort. habitat (seagrass areas, sandy areas, muddy, etc.). resource uses (capture fishing, aquaculture, beach resorts, tourism, sanctuary, migration paths, etc.); and the issues and threats. <p>5. Prepare a base map that will be used for the fisheries resource mapping. The map will be enlarged and pasted to a Manila paper with size 24 x 36 inches.</p> <p>6. Prepare cut-out icons representing the fishery resources and features in wetland (ex. fishes, gear, boat, aquaculture area, fish sanctuary, etc.). Use a double-sided tape so that the icons can be stuck to the places in the map where the resources / features are supposed to be located. The icons made should be sufficient to represent as many resources as necessary.</p> <p>7. Instruct the participants to place the icons on the map. Encourage all members to participate in the activity.</p> <p>8. After placing the icons, a presenter will be selected and assigned for the presentation of the map to the group. The participants will be encouraged to make comments and validate the map.</p> <p>9. A documenter will take note of the comments and initiate finalization of the map after the presentation. This person shall do the write up explaining the map with the guidance of the group members.</p> <p>10. Do a ground-truthing/ validation of the generated resource map. Use a GPS to determine the exact coordinates of the resources represented by the cut-out icons. Record the coordinates and resources validated.</p> <p>11. The recorded data and coordinates will be submitted to the GIS expert and a GIS map will be developed showing the resources of the wetland.</p> <p>12. A final map will be generated showing the fisheries resources and activities in the wetland.</p> <p>13. Fisheries Resource mapping and validation should be done once a year to keep a record of any changes that may occur.</p>
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	<p>Fish Catch Monitoring</p> <ol style="list-style-type: none"> 1. The Fish Catch Monitoring will be conducted by a data analyst and enumerators. A quarterly orientation and training will be conducted for the enumerators and data analysts. 2. The data analyst shall be tasked to identify and establish sampling stations based on the following criteria: <ol style="list-style-type: none"> a. location fish landing sites, b. number of fisherfolk in the area, c. number of fishing boat and gear, d. type of ecosystems and habitats present categorized as disturbed and undisturbed; and e. priority species classified into endemic, alien and threatened species. 3. The sampling stations must represent the major and minor landing sites in inland wetlands. The number of enumerators will depend on the identified sampling/landing sites. At least 2 enumerators will be assigned per sampling/landing site. 4. The fish catch monitoring survey must be done during the peak fish landing time of the day. Enumerators must be at the landing site early before the arrival of the fisherfolk with their catch. The peak fish landing time may vary during the day. 5. Upon arrival of the fisherfolk, the enumerator should quickly approach the fisherfolk and begin the interview.
Reference	BMB Technical Bulletin 16-A
Applicable Annexes	

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
<ol style="list-style-type: none"> i. Other studies conducted in the project area, if available i. Municipal fisheries data 	<ol style="list-style-type: none"> a. Bureau of Fisheries and Aquatic Resources Regional Office b. Municipal Agricultural Office for the fisheries data

6.4.4.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
Threat to existence and/or loss species of important local and habitat	Identify and assess project impacts in terms of threat to existence and/or loss of species, abundance, frequency, and distribution of species and include overall impact on freshwater ecology.
Threat to abundance, frequency and distribution of species	



	Show in a map sampling sites for monitoring purposes based on the most significant threats identified.
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6.4.4.4 Potential Impacts

Pre- Construction	Construction	Operation and Maintenance	Decommissioning
	<p>Loss of habitat</p> <p>Temporary to permanent physical alteration of site where construction work is to be done</p> <p>Change in Species richness due to decrease water flow</p> <p>Reduced productivity and upstream-downstream transit of organism in the vicinity of construction area.</p>	<p>Loss of habitat</p> <p>Temporary to permanent physical alteration of site where construction work is to be done</p> <p>Change in Species richness due to decrease water flow</p> <p>Reduced productivity and upstream-downstream transit of organism in the vicinity of construction area.</p>	



6.4.5 Marine Ecology

6.4.5.1 Definition

Coral reefs, seagrass, mangroves and soft bottom/mudflats provide various types of habitats for fish, invertebrates and other marine organisms essential for the completion of their life cycles. Coral reefs, mangroves, and associated habitats (e.g., beach forests and mudflats) protect coastal communities from strong wave action, winds, storm surges and tsunamis. More importantly, these habitats are important sources of food and income such as from fisheries and ecotourism. In addition, coastal and marine ecosystems are equally efficient sequestors of carbon dioxide making them important repositories tempering effects of climate change.

6.4.5.2 Baseline Data

Primary Data	
Tools/Equipment Needed	<ul style="list-style-type: none"> • SCUBA gears and tanks • Transect lines (two 50 m or two 100 m lines) • Underwater slates with pencil • Underwater camera • Tetrapod (specs specified below) • GPS • Surface marker buoys/balloons
Procedure on how to collect	<p>Sampling Station Selection</p> <p>Once the total area covered by each of the coastal and marine ecosystem is estimated in each region, the total number of sampling sites can be determined using a randomization technique. Randomization improves the accuracy of measures and also provides for a wider scope of generalizations. Randomization is defined as giving each possible sample an equal chance of being sampled. This refers to the manner by which each of the sampling sites is chosen. Random selection of sampling sites simply means that each of the sampling chosen has an equal chance of being selected with the rest of the samples. This can be carried out by constructing identical grids on the map showing the locations of the given ecosystem, say coral reefs. For example, we construct identical 100 grids over the location of an ecosystem covering 500 with each grid representing an area of about 5 hectares. Each grid will be assigned a number and then draw 20 numbers at random (using a tambolito or generating a random number from 1 to 100). The grids with the corresponding numbers drawn are designated sampling sites for that ecosystem (e.g., coral reefs). Repeat the same procedure for another type of coastal ecosystem until all types of ecosystems are covered. The suggested number of sampling site per ecosystem type is 20 sampling sites per 500 hectares of that ecosystem. Hence, for every 500 hectares of any given ecosystem we choose randomly 20 sampling sites, 1000 hectares 40 sampling sites so on and so forth. The suggested number of sampling sites in this manual is not</p>



	<p>fixed and can vary depending on many other factors such as resources (availability of competent personnel, funding, time). In cases when the suggested number cannot be met, a reasonable justification must be provided.</p> <p>The detailed assessment to determine the condition of each type of ecosystem will be conducted on these sampling sites following standard and widely accepted methodologies specific for each ecosystem. The determination of a condition of an ecosystem is based on an evaluation of key components of biodiversity as well as the levels of various threats to the ecosystem in a given location. The key components of biodiversity include species composition, species richness and abundances. Species composition refers to the identified species of animal, plant, and algae within the scope of the method, while species richness is simply the total number of species counted. Abundances refers to the number of individuals of each species and are expressed as densities such as number per unit area (x/m^2) or biomass per unit area (kg/m^2) for non-colonial individuals and as percentage cover for colonial individuals (e.g., corals). Species composition and species richness provides an idea about the trophic structure of the ecosystem and together with abundance data they provide insights about ecosystem functionality. The levels of various threats are important to obtain because these are the factors that adversely affect the condition of the ecosystem.</p> <p>The monitoring sites will be chosen from the locations of the sampling sites after the baseline assessment. The baseline assessment will generate questions and provide targets from which the locations and number of monitoring sites will be determined. It is suggested that the monitoring sites are subsets of the sampling sites. Hence, 3-5 monitoring sites per 500 hectares of an ecosystem is sufficient. The frequency of monitoring will be made at least once a year for all types of coastal and marine ecosystems.</p> <p><u>Coral Reef Assessment</u></p> <p>The assessment and subsequent monitoring of the state of coral reefs (i.e., percentage cover, species composition and abundance) will be assessed using the photo transect method. In each of the monitoring station, two 50m transects will be laid on the reef following a uniform depth contour. Starting at the zero mark of transect, digital photographs will be taken at one meter interval using a digital still camera equipped with an underwater housing. Photographs will be obtained at a camera to substrate distance of 1.2 m. The consistency of the camera distance to the substrate will be</p>
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	<p>maintained using a stainless distance bar with a camera mounting provision. The camera is set at full wide angle to capture the largest possible area of the substrate. Photographs will be refined using the ADOBE Photoshop and will be processed using Coral Point Count with excel extension (Copco) software. Each picture will be overlaid with ten random points and the life forms intercepted in these points are sampled.</p> <p>The life forms and hard coral genus intercepted by each of the points (“+”) were recorded and scored. For the life form identification, the standard 28 benthic lifeform categories of English <i>et al.</i> (1997) were used. Percent cover was computed using the following equation:</p> $\%Cover = \frac{\text{Total Sampled Points of Category}}{\text{Total No. of Points per transect}} \times 100$ <p>Coral reef status was then categorized based on live coral cover as established by Licuanan et al. (in press):</p> <ul style="list-style-type: none"> • Excellent >44% live coral cover • Good 34-44% live coral cover • Fair 22-33% live coral cover • Poor 0-22% live coral cover <p>For the sampling sites chosen as monitoring sites, concrete blocks will be used to mark the general position of transect laid in the stations. The coordinates of the locations will be determined from a GPS and this information will be used to locate the station during the next monitoring visit the area. Monitoring shall be conducted once/twice a year.</p> <p><u>Associated Reef Fish</u></p> <p>The same transects laid for the coral reef assessment and monitoring shall be used for the assessment of the associated fish assemblages. The fish visual census (FVC) method will be used. The census starts about 20 minutes after transects are laid to provide fish time to return to natural activity. All fish encountered within 5m on left, right and above the line will be identified to lowest possible taxon level (Allen <i>et al.</i>, 2003; Randall, 2005; Kuitert and Debelius, 2006), the individuals per species counted, and their total lengths estimated to the nearest centimeter. The information is recorded onto underwater writing slates. The identification of fish may be limited to families (common names or local names) for non-</p>
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	<p>technical divers, but up to species levels for competent and highly skilled observers (e.g., staff from Higher Education Institutions (HEIs). The field conduct of the FVC can be sourced to highly skilled observers whenever there is still none in the region.</p> <p>These procedures follow the principles of the fish visual census technique described by English <i>et al.</i> (1997). The biomass of fish was estimated using the formula:</p> <p>$W = aL^b$ (W = weight in grams, L = length in cm, a and b = growth constants; Kulbicki <i>et al.</i>, 1993; Letourneur, 1998; Letourneur <i>et al.</i>, 1998; Gonzales <i>et al.</i>, 2000; Froese and Pauly, 2004).</p> <p>The composition of the fish assemblages will also be determined by categorizing each species either as “major”, “target” or “indicator species” (FishBase 2004). Major species are not the commercially important species targeted by fishers but are unique members of the fish communities and function as important trophic links of energy transfers. Target species are the commercially important fish and targeted by fishers for food. The indicator species are hard coral-associated species that may give an indication of the relative condition of the reefs (Crosby and Reese, 1996). Monitoring shall be conducted once/twice a year depending on the resources of each region.</p> <p><u>Mangroves</u></p> <p>Mangrove forest is a unique ecosystem with community of trees occurring in a much-defined zonation pattern. This mangrove zonation pattern is dictated by several factors, but the most important ones are the type of substrate and the tolerance of the species to salinity and inundation. For instance, a particular zone can be dominated by a single species. Hence, in doing a mangrove survey, it is necessary that all mangroves from seaward to landward be properly sampled. Unlike the terrestrial forestlands, the diversity in mangrove forest is significantly lower. However, if the associated flora and fauna are considered, the diversity of mangrove forests are among the highest. Mangroves support various animal groups such as monkeys, birds, insects, spiders, crustaceans, worms and algae.</p> <p>At the chosen sampling sites for mangrove areas, two replicate transect lines are laid from the shoreline extending to the landward zone of the mangrove stand/forests. Each transect must be separated by at least 50m. Plots measuring</p>
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	<p>10m x 10m will be established along the transect line at intervals of 20 to 30 m. The number of plots per transect will be determined on the extent of the mangrove stand. All trees (growing with heights > 3m) enclosed with the 10m x 10m plot will be identified and counted and their percentage crown cover estimated. The percentage crown cover is obtained following the equation below.</p> <p>Percentage Crown Cover = $\frac{\text{total crown cover}}{\text{total area sampled}} \times 100$</p> <p>Then, within each 10m x 10m plot, a smaller 5m x 5m plot is made and all saplings (heights between 2 and 3 m) inside this are identified and counted. Similarly, within the 10m x 10m plot, a smaller 1m x 1m plot is made and all seedlings (heights < 1m) inside this smaller square is identified and counted. The condition of the mangrove area is then assessed following the mangrove habitat criteria developed during a Participatory Coastal Resource Assessment in a Coastal Resource Management Project (PCRA-CRMP).</p> <p><u>Seagrass Beds</u></p> <p>Three 50 m transect lines, separated by a 25 m distance in between shall be laid parallel to each other. Transect lines should be laid perpendicular to the shore, from the shallow intertidal zone to a depth until where seagrass is present. Start and end of the transect tapes should be marked using a GPS. Pegs can be used to hold transects in place until all sampling has been completed.</p> <ul style="list-style-type: none"> • A 0.5 m by 0.5 m quadrat shall be laid starting from the 0-m mark on the right side of each transect at 5 m interval. Data recorder should always walk on the left side of transect to avoid any sediment disturbance on the quadrats to be measured. • Photograph of the quadrat will be taken at 5-, 25-, and 45-m or on quadrats of particular interest (e.g., dugong trail, high algal abundance, lots of gastropods, etc.). Photos should be taken BEFORE any measurements are taken to avoid sediment disturbance. Labels (code for locality, site number, transect, and quadrat) on each quadrat is highly recommended. Photo should be taken at a vertical angle as much as possible. • Describe sediment composition: <ul style="list-style-type: none"> ○ <i>mud</i> - has a smooth and sticky texture. Grain size is less than 63 μm ○ <i>fine sand</i> - fairly smooth texture with some roughness just detectable. Not sticky in
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	<p>nature. Grain size greater than 63 μm and less than 0.25mm</p> <ul style="list-style-type: none"> ○ <i>sand</i> - rough grainy texture, particles clearly distinguishable. Grain size greater than 0.25mm and less than 0.5mm ○ <i>coarse sand</i> - coarse texture, particles loose. Grain size greater than 0.5mm and less than 1mm ○ <i>gravel</i> - very coarse texture, with some small stones. Grain size is greater than 1mm. <ul style="list-style-type: none"> • The seagrass species shall be identified (see seagrass ID guide) and the percent cover per species shall be estimated. Readings will be at every 5-m starting from 0-m up to 50-m. Seagrass composition must equal to 100% of the seagrass present in the quadrat regardless of the total cover. • Using a ruler, the canopy height shall also be determined by haphazardly selecting 3-5 leaf blades from within the quadrat, ignoring the tallest 20% of leaves. • Determine percent cover of epiphytes. Epiphytes are the algae that grow attached on the seagrass blades. To determine the percent cover of epiphytes, estimate the percentage of the total surface area of leaves covered by the algae. • Percentage of non-epiphytic algae will also be measured using the same technique used for estimating seagrass cover. • Other organisms (e.g., invertebrates, turtle or dugong grazing trails, etc.) in the quadrats shall also be recorded. • The data gathered shall be encoded in the seagrass monitoring data sheet <p><u>Mud Flats/Soft Bottom</u></p> <p>Duplicate sediment samples are collected from each of the sampling sites. Each sample is collected using core boring sampler with an area of 78.5 cm² and inserted up to 30 cm into the mud. The volume of sediment sample obtained as this depth is about 2.4 liters. Sampling sites should represent the three main zone/fringes of the softbottom habitat: supralittoral, midlittoral and infralittoral. These are where the core samples will be collected. The coordinates of the location where each sample was collected will also be recorded. Sediments collected using a core sampler inserted to depths of 30 cm are sieved using a 0.5 mm mesh immediately after collection. All soft bottom fauna retained on the sieve are stored in a properly labeled plastic containers for analysis. All samples are stained with Rose Bengal and fixed in 10% buffered seawater formalin.</p>
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In the laboratory, samples are cleaned with tap water to get rid of excess formalin and sorted using a stereo microscope. All soft bottom fauna is identified to the lowest possible taxa (usually family level) and stored in vials containing 70% alcohol. Density is expressed as number of individuals m². The identification can be sourced to local experts whenever there is no complement staff available within the region.

Collect sediment sample using a handheld core sampler

- Each core shall be taken to a depth of 30 cm
- Carefully place each sediment sample in a bucket and mix it with some water. Do not spill any of the sample
- Avoid breakage of fragile mollusk and worms as you transfer each core sample to a bucket

Sieving

- Carefully mix water with the sediment in the bucket
- Pour the sediment-water emulsion over the sieve (1mm mesh size)
- Repeat this process until all sediments from your core sample has passed through the sieve
- Hand sort the visible macro-invertebrates
- Plastic bag and label each sample – indicate location (barangay), sampling station and core #

Sorting and Recording

- After transporting your bagged samples carefully into your laboratory, you may now start grouping your macro-invertebrates into categories
- Identify each specimen in your sample using field guides or manuals. Consider only specimens that are visibly identifiable (i.e., 1.0-2.0 cm in size)
- Separate identified specimens into groups of similar type (bivalves, gastropods, worms, crustaceans, etc.)
- Count and tally each species carefully under each group – this will be for the abundance and species diversity estimates.

PLANKTON

At each sampling site for plankton, samples of plankton communities are collected using a plankton net with a mesh size of 60 μ and a mouth diameter of 0.3 m. The plankton net is lowered to a depth of about 10-15 m depending on light penetration (Secchi disk depth) and raise at a rate of not higher than 1 m per second. The volume of water sampled is



	<p>calculated by the area of the mouth of the plankton net times twice the depth the net was lowered.</p> <p>The concentrated sample of water collected at the cod end is then transferred to a properly labeled vial. Phytoplankton samples are preserved with Lugols solution while samples of zooplankton are fixed with 10% formalin immediately after collection. All samples will be allowed to stand undisturbed for about a week to allow organisms to settle at the bottom of the container. Excess liquid will be carefully decanted until about 50 ml was left. For phytoplankton samples, a 1 ml aliquot subsample is placed in a Sedgewick-Rafter cell counter and was examined under a microscope. For zooplankton samples, a 1 ml aliquot subsample is placed in a petri dish with grids and was examined under a microscope. Plankton organisms are identified to the genus level whenever possible, and their numbers counted.</p> <p>Plankton will be sampled using standard plankton net procedures. Samples shall be submitted to laboratory/academe to test for Chlorophyll A and community structure analysis. The formula, $\phi p = \frac{F}{V} \times 10^{-1}$, is used to estimate density of phytoplankton where ϕp is the density of phytoplankton, F the number of cells counted and V the total volume of water filtered in m^3. The formula, $\phi z = \frac{C \times A \times 10^{-1}}{D} \times 10^{-1}$, is used to estimate density of zooplankton, where ϕz is the density of zooplankton, C the number of organisms counted in the subsample, A the volume of the subsample in ml, and D the dilution volume in ml. All densities are expressed as number of plankton individual m^{-3}.</p> <p>Samples may be collected from the area where coral reef assessment and monitoring was conducted.</p> <p>Monitoring shall be conducted once/twice a year.</p> <p>Quick Guide to Sample Collection</p> <ul style="list-style-type: none"> • The depth of the sampling area should exceed 10 m and the recommended time of sampling is between 10 am to 2pm. • Lower the plankton net at a speed not to exceed 1m/second until it reaches the 10m marker • Wait for about 30 seconds to allow the plankton net to settle • Pull the rope at 1m/second
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	<ul style="list-style-type: none"> Wash the outer sides of the net with sea water, but be careful not to allow water to enter the mouth of the plankton net Wait until all water has drained from the sides of the net to the net bucket Transfer the plankton concentrate in the net bucket to a labelled plastic bottle, then add buffered formalin solution Submit samples
Reference	BMB Technical Bulletin 2017-05
Applicable Annexes	

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
ii. Other studies conducted in the project area, if available iii. Municipal fisheries data	c. Bureau of Fisheries and Aquatic Resources Regional Office d. Municipal Agricultural Office for the fisheries data

6.4.5.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
Threat to existence and/or loss species of important local and habitat	Identify and assess project impacts in terms of threat to existence and/or loss of species, abundance, frequency, and distribution of species and include overall impact on marine ecology. Show in a map sampling sites for monitoring purposes based on the most significant threats identified. Relate discussion to water quality and oceanography.
Threat to abundance, frequency and distribution of species	

6.4.5.4 Potential Impacts

Pre- Construction	Construction	Operation and Maintenance	Decommissioning
	Disturbance in the growth and development of marine	Disturbance in the growth and development of marine	



	flora and fauna.	flora and fauna.	
	Reduction of primary productivity	Reduction of primary productivity	
	Habitat Loss	Habitat Loss	



6.5 The Air Component

6.5.1 Climate

6.5.1.1 Definition

Climate generally refers to the average course or condition of the weather at a place usually over a period of years as exhibited by temperature, wind velocity, and precipitation. In the context of the PEISS assessment of climate and meteorological factors covers the current project area and future scenarios using the climate change scenarios of PAGASA.

6.5.1.2 Baseline Data

Primary Data	Not Applicable
Tools/Equipment Needed	
Procedure on how to collect	
Reference	
Applicable Annexes	

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
<ul style="list-style-type: none"> i. Climate Change in the Philippines ii. Climatological data (climate type, normal rainfall, extreme rainfall, normal air temperature, extreme air temperature, relative humidity, wind speed, wind direction, tropical cyclone frequency) 	<ul style="list-style-type: none"> a. PAGASA- Climatology and Agrometeorology Division

6.5.1.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
Change in microclimate	Identify and assess project impacts in terms of change in local microclimate change using PAGASA medium to long term projections.
Contribution in terms of greenhouse gas emission	Estimate projected GHG using IPCC guidelines, include mitigation and/or sequestration for both construction and operation phases.



6.5.1.4 Potential Impacts

Pre- Construction	Construction	Operation and Maintenance	Decommissioning
	Increased GHG emission from heavy equipment.	Increased GHG emission from road users.	

6.5.2 Air Quality and Noise

6.5.2.1 Definition

Air Quality refers to the atmosphere's average purity in a broad area as distinguished from discharge measurements taken at the source of pollution or the present characteristic or nature of the surrounding atmosphere.

6.5.2.2 Baseline Data

Primary Data	
Tools/Equipment Needed	<ol style="list-style-type: none"> 1. High-volume sampler 2. pre-weighed particulate filters 3. Gas analyzer 4. Absorbing solutions and sampling reagents 5. Portable power generator with 20-m (minimum) extension cord 6. Fuel for generator 7. Portable spectrophotometer (for analysis on field) 8. Vicinity map 9. GPS or compass 10. Outdoor thermometer 11. Barometer (for sampling at high elevations) 12. Rinsing bottle and triple distilled water 13. Field notebook 14. Felt-tip permanent marker for labeling 15. Non-powdered latex glove and tweezer 16. Safety equipment (hard hats, reflectorized vests, traffic warning signs, as appropriate) 17. Cooler with ice for storing chemicals 18. Camera 19. Optional: Portable anemometer and wind vane with mast
Procedure on how to collect	A. Before leaving for field sampling:



	<ol style="list-style-type: none"> 1. Clean and maintain instruments according to manufacturer's recommendations. Check for compliance with calibration schedules (performed by an independent laboratory usually every 6 months to 1 year). Check oil levels in generator. 2. Purchase particulate filters from a DENR-recognized laboratory. Ensure that particulate filters have been properly inspected, weighed, packed and labeled by the laboratory following DENR Air Sampling Manual. 3. Purchase absorbing solutions and sampling reagents for sulfur dioxide and nitrogen dioxide, following procedures prescribed by 1999 Clean Air Act. Ensure that reagents are packed, labeled and preserved following DENR Air Sampling Manual. 4. When sampling at distant locations where exposed absorbing solutions cannot be delivered to the laboratory without exceeding the required holding time, a portable spectrophotometer must be brought along to conduct analysis on field. 5. Ensure that absorbing solutions are accompanied by chain-of-custody forms, which should be filled out as necessary. 6. Whenever possible, purchase fuel for the generator from a station close to the sampling site, rather than travelling to the site with a full tank of gas in the generator. <p>B. During field sampling:</p> <ol style="list-style-type: none"> 1. Coordinate with local officials before sampling. If needed, hire residents as guides and field assistants. Instruct assistants on the purpose of the sampling, personal safety, and caring for the equipment. For their safety and preserving data quality, minimize their contact with samples and sampling materials. Provide field assistants with safety gear, food and drinks, and fair compensation. 2. Identify sampling station based on the Environmental Monitoring Plan or sampling map. Select sampling position following station selection criteria described below. Notify and obtain permission from property owners and local authorities before sampling. <p>Criteria for Air Quality Sampling Site Selection:</p> <ol style="list-style-type: none"> i. Samplers should be placed away from a flow obstacle such as a house, building, tree and other structures at a distance equivalent to at least 10 times the height of the obstacle. Schoolyards, parks and roof decks often serve as good sampling positions. ii. Place a sampler at least 5 meters from the edge of the traffic lane. For a heavily traversed road, place the samplers at least 20 meters from the roadside.
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	<p>iii. Do not place a sampler indoors or under obstructions like overhangs and tree canopies.</p> <p>iv. There should be at least 270 degrees unrestricted airflow around the sampler.</p> <p>v. The sampler intake line should be about 2 to 15 meters above the ground.</p> <p>vi. To avoid windblown dust from the ground, choose a location with good ground surface cover, such as short grasses.</p> <p>vii. If the environmental monitoring plan does not identify a sampling station, choose a location that represents air quality around a populated area.</p> <p>viii. Where possible, there should be a clear line-of-sight between the source and the station.</p> <p>3. Set up portable wind vane if available. Using visual cues or the portable wind vane, position generator at least 30 m downwind of sampling station. However, make sure that the generator poses no annoyance to residents, particularly during 24-hour sampling.</p> <p>4. Set up instruments and generator in safe, stable and secure positions. Put on or install safety equipment as necessary.</p> <p>5. For particulate sampling, use gloved hand or tweezers, place filter on high volume air sampler (HVAS) following equipment manufacturer's specification. Inspect filter for tears and holes. Check filter placement to ensure no leaks along the sides.</p> <p>6. For gas sampling, rinse impingers on gas analyzer with distilled water and shake off excess water. Transfer absorbing solutions to respective impingers. Rinse empty reagent containers and shake off excess water. Inspect wires, tubing and connections in all equipment in preparation for operation.</p> <p>7. Turn on equipment. Record time of start of sampling for each instrument. After about 5 minutes of operation, record flow rates of each instrument. Ensure that flow rates are steady and are within recommended ranges. For 1-hour sampling, record flow rate again after 30 minutes from start of sampling. For 24-hour sampling, record flow rates every four hours or make sure flow rate recorder is operating.</p> <p>8. Periodically inspect equipment operation and sampling conditions during the sampling period. Be prepared to discard samples and repeat sampling where data quality is compromised. Take pictures of sampling set-up from various directions. If sampling from a location other than that indicated in the monitoring plan, indicate sampling position in vicinity map.</p>
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9. In field notebook, record temperature, pressure, average wind speed, direction, and cloudiness during sampling based on observations taken near start, middle, and end of sampling period. If wind vane and anemometer is not available, use the Beaufort scale to estimate wind speed and visual indicators (clouds, smoke plumes) to find wind direction. Record stability class using Pasquill's criteria. For 24-hour sampling, record weather conditions every four hours. Indicate occurrence of rain. For conditions where safety is compromised (such as poor weather), stop sampling.

C. During end of sampling event:

1. Near end of 1-hour sampling, record flow rate again. Turn off each sampler exactly 1 hour after start of sampling (or at end of sampling period).

2. Using gloved hand or tweezers, remove filter from HVS, fold in half and return to envelope. Record name of station, average flow rate, date and time of sampling on envelope.

3. Rinse absorbing solution containers and shake off excess water. Transfer spent solution from impinger to container. Record name of station, date and time of sampling on container label, then pack container in ice. Rinse impingers and shake off excess water. Prepare instruments and materials for transportation to next station.

4. Analyze samples within prescribed holding times by sending them immediately to a laboratory or by analyzing them on field using the portable spectrophotometer.

5. Log station name, coordinates, date and time of sampling, flow rates, weather conditions, reagent and filter labels, and other relevant information in field notebook. Include spectrophotometer readings, calibration results and calculations. List name of sampling personnel or MMT members present.

6. Locate the sampling stations in the vicinity map.

Reminders for 24-hour sampling:

i. If sampling personnel cannot be present at the station during the entire 24-hour period, the field assistants may be instructed in taking basic instrument readings. Provide field assistants with shelter and a means of contacting sampling personnel if an emergency occurs while on duty.

ii. Train the field assistants to read and record flow rates and weather conditions according to schedule. However, check their work regularly.

D. After sampling:

1. Send filters and reagents back to laboratory for analysis. Ensure that samples are properly labeled, and that Chain-of-Custody (COC) forms are properly accomplished and returned to laboratory. Provide the laboratory flow rates and



	<p>meteorological data for calculation of concentrations.</p> <p>2. Clean equipment and prepare for next sampling.</p> <p>3. Wait for laboratory report, periodically following up, as necessary. Check laboratory calculations. Keep all laboratory reports for inclusion in the EIA Study.</p> <p>4. Prepare ambient air sampling report using sampling report template. Compare the sampling results with relevant ambient air quality standards.</p>
Reference	DENR DAO 2001-08
Applicable Annexes	Annex 6-1

Secondary Data	Sources of Data (Reference Laws, Rules and Regulations/Lead Regulatory Agency)
i. Regional Air Quality Monitoring	a. EMB Regional Offices

6.5.2.3 Impact Assessment Approach

Identified Potential Impacts	Impact Assessment Approach
<p>Degradation of air quality</p> <p>Characterization of air quality parameters</p> <ul style="list-style-type: none"> • TSP • PM 10 • PM 2.5 	<p>Identification and assessment of impacts of the project to the identified parameters including VOCs and color.</p> <p>Show in a map proposed monitoring stations.</p> <p>Compare changes in air quality over time using statistical tools. (e.g., across sampling sites across time and test for significant changes).</p>
Increase in ambient noise level	<p>Discuss how the project would affect existing properties in the area in terms of relocation and devaluation.</p> <p>Identification and assessment of impact to ambient noise level using noise attenuation modelling and comparing it to relevant standards.</p>

6.5.2.4 Potential Impacts

Pre- Construction	Construction	Operation and Maintenance	Decommissioning
	<p>Increased noise generation</p> <p>Increased concentration of Total</p>	<p>Increased noise generation</p> <p>Increased concentration of Total</p>	



	Suspended Particulates Increase in SOx and NOx concentrations from vehicle emission	Suspended Particulates Increase in SOx and NOx concentrations from vehicle emission	
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6.6 People

Among the potential key impacts on the people in the EIS Technical Screening (Scoping) Checklist are as follows:

- a. Displacement of settler/s
- b. Displacement / disturbance of properties
- c. Change/conflict in land ownership
- d. Change/conflict in right-of-way
- e. In-migration, proliferation of informal settlers
- f. Cultural/Lifestyle change (especially on Indigenous Peoples, if any)
- g. Displacement of livelihood
- h. Generation of Local Benefits from the project
- i. Enhancement of employment and livelihood opportunities
- j. Increased business opportunities and associated economic activities
- k. Increased revenue of LGUs
- l. Threat to public health and safety
- m. Threat to delivery of basic services/resource competition
- n. Traffic congestion

The following are the corresponding social data for such key potential impacts.

- a. Demographic data of impact area (number of households and household size, land area, population, population density /growth, gender and age profile, literacy rate, profile of educational attainment, settlements map, census of population/property that will be displace/disturbed, and housing profile/availability of housing/number of informal settlers, Indigenous Peoples (if any) and existing culture/lifestyle that maybe significantly affected.
- b. Socio-economic data: main sources of income, employment rate/profile, sources of livelihood, poverty incidence, commercial establishments and activities, banking and financial institutions.
- c. Statistical data/information related to public services: literacy rate, profile of educational attainment, morbidity and mortality rates (infants and adults - 5-year trend), common diseases in the area including endemic diseases, environmental health and sanitation profile, crime rate, food security;
- d. Availability of public services in terms of water supply, power supply, communications/transportation, health resources (government and private), peace and order/crime, education facilities, recreational facilities/sports facilities;
- e. Road network/ systems and existing transportation/traffic situation



6.6.1 Demographic Data

Overview	<p>Demographic data generally provides one source of reliable data that gives valuable insights about a community's future infrastructure needs, resource allocation, and demand for municipal and other infrastructure need. It is also equally important that within the LGUs Master Plan which present a vision for growth and development, it should include a section dedicated to demographic trends that informs and/or relates to the community vision.</p> <p>Demographics comprise an array of socioeconomic information, including the breakdown of a population by gender, age, ethnicity, income, employment status, home ownership, and even communication access which are useful elements in the planning for an appropriate intervention to mitigate any adverse impact due to the project</p>
Objective	To gain an understanding on the socioeconomic and demographic profile of the project site and provide an opportunity for the people to influence project design in a positive manner, improve transparency and accountability of decision-making; and. Increase public participation in the EIA process.
Timing	Pre-Feasibility Stage
Output	Demographic Profile Report
Lead Person	Supervising Environmental Management Specialist
Reference:	<p>The Philippine Statistics Authority is usually the official source regional and barangay level data which consists of a variety of data information from population and housing to labor and health statistics. https://psa.gov.ph.</p> <p>Minimum Basic Needs – barangay level board information</p> <p>Other studies</p>
Procedure	
	1. Review information from secondary sources (PSA, other existing studies) and summarize relevant information as provided
	2. Examine the Minimum Basic Need (MBN) usually posted on their bulletin board with relevant information on the profile of the barangays
	3. Conduct of Key informant interview with local leaders, barangay health workers regarding what constituents see as their most basic needs to lead a quality life and gain perspective on their living condition and priority needs
	4. Document results of KII. Take photos and prepare a list of persons met
	5. Map out the poor areas of the locality and indicate location of basic services
	Items to be Considered in Demographics (Minimum Requirement)



	<ul style="list-style-type: none"> • LGU classification (1st class, 2nd class, 3rd class) • Total number of Barangays affected within the project scope • Total population per barangay that will be directly affected • Dominant group in the community (adult, younger citizen, senior citizen) • Barangay level household socio-economic status (category _wealth quintiles) • Education level attained by household population; net enrolment (attendance) ratio in primary education; literacy rate of 15–24-year-olds; gender parity index • Living status: Housing condition and income • Labor and employment • Migration pattern • Ethnicity
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6.6.2 Local Economy, Employment and Livelihood

Overview	Households within a community and members within a household are usually very different in composition, socio-economic status and in assets as well as access to livelihood opportunities within the community. In order for development-oriented investments to be useful and sustainable, they must be designed to meet the needs and priorities of the community, its different households and individual household members. Consequently, different categories of people have different priorities when managing resources and valuing benefits.
Objective	To gain an understanding of the roles and dynamics of local situation and governance structures in providing an enabling environment for providing livelihoods and economic growth
Timing	Pre-Feasibility Stage - data gathering stage
Output	Livelihoods Analysis – sub section of the Social Impact Assessment
Lead Person	Supervising Environmental Management Specialist -ESSD
Reference:	<p>Socio-economic Survey Form</p> <p>Perception Survey, KII</p> <p>Findings from Review of secondary data</p>
Procedure	
	1. Conduct of Key Informants interview or focus group discussion.
	<p>2. Discuss meaningfully with the groups the items specified in the list below.</p> <ul style="list-style-type: none"> • <i>Current sources of income.</i> What activities do people typically engage in? What are their priorities and constraints? • <i>Access to resources.</i> What are the existing sources that are available as income generating activities in the locality? What are their constraints in accessing these resources?



	<ul style="list-style-type: none"> • <i>Labor</i>. who does what? Who has access to and control over resources and what are the needs and priorities of different types of people (ex. famers, laborers, industrial workers, other employment opportunities)? • <i>Constraints and access of women to employment</i>. How are different groups such as women, youth and the landless at a disadvantage in terms of access to, control over and benefits from resources and services, and is it necessary that particular attention is paid to reaching and supporting these groups? • <i>Support Groups</i>. What are the existing organizations that provide assistance to livelihood (NGOs) and the type of services provided (Ex. New technology for farmers, support for women income generation activities; access to credit facilities, etc.) • <i>Ecological factors</i>. How do ecological factors such as the seasonality of rainfall and availability of fuel wood, changes in climate and biodiversity affect labor and income generating activities? • <i>Mobility and market</i>. What are the means of transport to market their product? • <i>Vulnerable groups</i>. Are there groups that are particularly vulnerable? (Ex. children/youth- or grandparent-headed households, people living with HIV/AIDS, poor households, people with disabilities, • Recommendations to improve livelihood and employment opportunities
	3. Document all information provided in FGD meetings
	4. Take photos, list of attendees
	<p>5. Use the information below for providing recommendation as applicable when developing a livelihood restoration plan as required by the project</p> <ul style="list-style-type: none"> • Targeting communities and vulnerable groups/ households most in need. • Directing assistance to affected producers through carefully targeted input distribution (seeds and tools), grants and revolving funds to enable them to sustainably recover/improve their livelihoods. • Promoting recovery of production systems with emphasis on financial and environmental sustainability and introduction of appropriate technologies and management practices, and investing in enabling and facilitating infrastructure. • Launching an integrated and gender sensitive approach to re-establish and improve livelihoods. • Rehabilitating or improving public and private agricultural sector support services • Supporting technically, economically and financially viable (new) investment opportunities through public-private partnerships to create employment.
Guidance for PAP	In relation to persons affected by the project, one of the essential elements of the RAP is the rehabilitation of lost productive assets and economic sources of income due to the involuntary resettlement. To ensure that the quality of life of PAPs will be restored and sustained before resettlement took place.



	<ul style="list-style-type: none"> a. Examine the potential affected livelihood of PAPs b. Use the SES results to track both a) extent of land lost, b) categories of lost livelihood c) articulated recommendations of PAPs for livelihood assistance. c. Determine occupational and local market needs and use this information to serve as a basis for demand-driven skills training and short-term vocational training. d. Review conditions of the Joint Memorandum Circular (if any) and coordinate support with JMC partners and conduct regular meetings with partners agencies e. Review compliance of Contractor for priority employment for affected PAP f. Ensure employment for women on equal opportunities with men. g. Involve participation of NGOs or other existing agencies with livelihood program in the area h. Implement livelihood program (skills training, financial management, referral and linkages to other institutions)
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6.6.3 Public Sanitation

Sanitation refers to public health conditions such as drinking clean water, sewage treatment, toilets and the practice of hygiene in the households, which is a condition and practices that help maintain health and prevent the spread of diseases.

Access to sanitation is measured by the percentage of the population with access and using improved sanitation facilities. Important indicators, such as availability of safe water, water system functionality, safe management of excreta, water quality, sustainability, will need to be measured; and data will need to be disaggregated by gender, socioeconomic status, and disability status.

Some of the indicators and areas to focus when assessing the sanitation of the community are the following:

- a. Percentage of households with year-round access to improved water facility (level 1, 2, and 3)
- b. Percentage of people with direct connection to level-1 facility
- c. Examine percentage of households with access to a sanitation facility and type of sanitation facility
- d. Examine recurrent costs for water supply services paid by the community
- e. Percentage of households who owns sanitary toilets or without sanitary toilets
- f. Separate toilets for men and women



- g. Hygiene is taught in school
- h. Roles and responsibility of men and women in keeping with sanitary practices
- i. Incidence of water borne diseases in the locality
- j. Ten leading causes of death
- k. Availability of health units in the locality



6.6.4 Community Health and Safety

Overview	<p>Community health and safety refers to protecting local communities from hazards caused and/or exacerbated by project activities (including flooding, landslides, contamination or other natural or human-made hazards), disease, and the accidental collapse or failure of project structural elements such as dams. Project-related activities may directly, indirectly or cumulatively change community exposure to hazards.</p> <p>A significant concern with major development projects is the spread of communicable diseases from the workforce to the surrounding communities.</p>
Objectives	<ul style="list-style-type: none"> To avoid adverse impacts on the health and safety of affected communities during the project life cycle. To ensure quality and safety in the design and construction of project-related infrastructure, preventing and minimizing potential safety risks and accidents
References	<ol style="list-style-type: none"> Joint Memorandum Circular No. 20-04-A Series Of 2020 of DTI And DOLE Interim and Supplemental Guidelines on Workplace Prevention and Control of Covid-19 DOLE+Joint+Memorandum+Circular+No.+20-04-A.pdf DOLE'S Labor Advisory No. 18, Series of 2020: Guidelines on the Cost of Covid-19 Prevention and Control Measures https://www.dole.gov.ph/news/labor-advisory-no-18-series-of-2020guidelines-on-the-cost-of-covid-19-prevention-and-control-measures/ Inter-Agency Task Force for the Management of Emerging Infectious Diseases Resolution No. 78, Series of 2020, dated October 8, 2020 https://www.doh.gov.ph/sites/default/files/healthupdate/IATFResolution78.pdf Additional Health Information and Practices https://covid19.healthphilippines.ph/information-for/Everyone/ https://covid19.healthphilippines.ph/information-for/businesses/ EMB MC 2020-30 Interim Guidelines on Public Participation in the Implementation of the Philippines Environmental Impact Statement System (Pd 1586) During the State of National Public Health Emergency
Guidance 1	<p>On Hazardous Materials Management and Safety:</p> <p>Minimize potential community exposure to hazardous materials and substances resulting from the project.</p>
Guidance 2	<p>Risks associated with influx of project workers:</p> <ol style="list-style-type: none"> Ensures that appropriate measures are taken, including by project contractors, to avoid, mitigate and manage the risks and potential adverse impacts on health and safety of communities arising from the influx of project-related workers into project areas. Provide training, awareness raising programs and codes of conduct
Guidance 3	<p>Community exposure to health issues:</p> <ol style="list-style-type: none"> Minimize the potential for community exposure to health risks (e.g., pollution, contaminated areas/resources) and diseases communicable and non-communicable diseases, injuries, nutritional disorders, Avoid or minimize transmission of communicable diseases that may be associated with the influx of temporary or permanent project labor.



Guidance 4	<p>COVID 19 Pandemic Health Protocols:</p> <ol style="list-style-type: none"> strict social distancing, wearing of face masks, presence of sanitation stations, and taking of body temperature
	<p>In the Conduct of Public Consultations:</p> <ol style="list-style-type: none"> Any form of public consultations exceeding 10 people shall not be allowed during COVID-19 situation. Staff engaged in field activities shall devise new ways of engaging with the PAPs and obtaining the required information which can be obtained through the use of social media, text messages, phone call or collection of information through their community leaders channeled through the DEOs. Use of leaflets and brochures can also be an effective way to disseminate information. Setting-up of FB page accessible to all PAPs can also be done. Use Zoom or other form of social media to avoid exposure. Observance of requirements and conditions under EMB MC 2020-30
	<p>In the Conduct of Socio-Economic Surveys</p> <ol style="list-style-type: none"> Use simple questionnaire that captures significant data for analysis. Translate the questionnaire in local dialect for better understanding. Use a self-administered questionnaire that could easily be understood this may require adjustment in the current questionnaire. Distribute the questionnaires to PAPs with general instructions and set a day for collecting back the questionnaire When administering questionnaire on field, observe social distancing while explaining the procedures which should only last for 10-15 minutes. The field staff will leave his or her contact number for further questions or clarifications about the questionnaire. Field Staff could quickly review the questionnaire and where information is not correct, or has skipped the answer, raise the issue with the respondent in a short time as possible. Social distancing is strictly observed all throughout the process. The field staff may do a follow-up phone call for other matters for clarifications
	<p>In Appraisal of Real Properties, Assets, Income Loss</p> <ol style="list-style-type: none"> Prior to visiting the properties, field staff can inform the PAPs about the visit and request for only one to two persons to assist the staff during the appraisal activity. Ensure that the landowner is a decision maker and could provide answer to the appraiser The property representatives should be adults and can provide answers to the questions that will be raised by the appraiser. Wear a mask and observe social distancing. Local DPWH staff and the property representatives shall wear masks and strictly observe social distancing all throughout the procedures. Clarify information through phone calls or other online means.
	<p>Resettlement of Informal Settler Families (ISFs)</p> <ol style="list-style-type: none"> Prior arrangements on the upcoming meeting will be done particularly on the number of family members who can be present during the brief meeting (1-2 members)



	<ul style="list-style-type: none">b. Ensure that meeting is brief and short as possible. The meeting should only last for 20-30 minutes and only two families can be visited for a day.c. Follow up on inquiries shall be done through phone calls or messaging on social media.d. Resettlement program shall be disclosed through the DPWH website or posted in places visible to the PAPs.e. A Facebook page could also be set up which could be accessible to PAPsf. During the actual relocation the PAPs and the relocation committee shall maintain social distancing and wearing of masks.g. Considered deploying personnel for dismantling of structures and in hiring trucks for hauling and vehicles for transporting the PAPs to avoid crowding.h. Limit the number of hours in field as well as frequency of field work.i. Designate the team by batches could help prevent and limit the number of people who can be infected and subsequently quarantined.j. Immediately provide treatment of staff who has been “exposed”.k. Be familiar with the following information on health protocols.
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6.6.5 Cultural Heritage Conservation

6.6.5.1 Cultural Heritage

Priority shall be given to avoiding impacts on cultural heritage relevant to Indigenous Peoples' identities and cultural, ceremonial, or spiritual components of their life when a project may substantially influence such heritage. The Client shall seek the FPIC of impacted Indigenous Peoples when significant project effects are unavoidable.²⁴ Where a project proposes to use the cultural heritage such as knowledge, innovations, or practices of Indigenous Peoples for commercial purposes, the Client will inform the Affected Communities of Indigenous Peoples of:

- their rights under national law.
- the scope and nature of the proposed commercial development.
- the potential consequences of such development and
- obtain their FPIC. The Client should ensure that a fair and equitable share of benefits is achieved from the commercialization of such cultural resources.

Where members of the affected communities of Indigenous Peoples individually hold legal title, or where the relevant national law recognizes customary rights for individuals, the requirements will apply.

Critical Cultural Heritage includes natural areas with cultural and spiritual value such as sacred groves, sacred bodies of water and waterways, sacred trees, and rocks.

6.6.5.2 Cultural Property and Heritage

Whereby:

Recognizes the value of cultural legacy to present and future generations. This Principle seeks to safeguard irreplaceable cultural heritage and guide clients on how to protect cultural heritage in the course of their business operations by the Convention Concerning the Protection of the World Cultural and Natural Heritage. Furthermore, this Principle's criteria on the utilization of cultural assets in a project are based in part on standards established by the Convention on Biological Diversity. The application of this Principle is determined during the Social and Environmental Assessment process. The activities required to satisfy this Principle's requirements are handled by the Client's Social and Environmental Management System. The requirements for the assessment and management systems are specified below:

For this Principle, cultural heritage refers to:

- tangible forms of cultural heritage, such as tangible property, structures, and sites having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values.

²⁴ Sacred groves, sacred water and rivers, sacred mountains, sacred trees, sacred rocks, burial grounds, and sites are examples of natural areas having cultural and spiritual significance.



- unique natural environmental features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls; and
- intangible forms of culture proposed to be used for commercial purposes, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles, are also included.

The requirements of this Principle apply to cultural heritage regardless of whether or not it has been legally protected or previously disturbed.

6.6.5.3 Protection of Cultural Heritage in Project Design and Execution Internationally Recognized Practices.

To comply with relevant national law on cultural heritage protection, such as national law implementing the Convention Concerning the Protection of the World Cultural and Natural Heritage and other relevant international law, the Client should safeguard and support cultural heritage by engaging in locally and internationally recognized cultural heritage practices. When a project includes cultural heritage implications and hazards, the Client should employ and retain competent and experienced specialists to assist with the assessment.

6.6.5.4 Different Types of Cultural Heritage

R.A. No. 10066 lays out the principles, policies, and guidelines that cultural agencies, government institutions, and citizens of the country should follow to increase people's appreciation of our shared heritage and to strengthen and advance various interventions aimed at preserving the country's cultural wealth.

The 1987 **Philippine Constitution, under Article XIV on "Arts and Culture," declared** that:

"Section 14. The State shall foster the preservation, enrichment, and dynamic evolution of a Filipino national culture based on the principle of unity in diversity in a climate of free artistic and intellectual expression.

"Section 15. Arts and letters shall enjoy the patronage of the State. The State shall conserve, promote, and popularize the nation's historical and cultural heritage and resources, as well as artistic creations.

"Section 16. All the country's artistic and historic wealth constitutes the cultural treasure of the nation and shall be under the protection of the State which may regulate its disposition."

If the DPWH Archaeologist and Anthropologist determines that the cultural heritage site is a very significant archaeological site without skeletal remains, the DPWH's Archaeologist and Anthropologist shall decide the necessary response in cooperation with the Client.

According to Annexes 1 and 2, the following management alternatives will be considered:



1. *Avoidance*: This strategy minimizes the impact on the site by redesigning or relocating portions or all the projects. This is the ideal choice from the standpoint of cultural resource management.
2. *Salvage Excavation*: This data recovery method is disruptive to the site and may cause developmental delays. Salvage excavations, if necessary, should be carried out in compliance with the Company's
3. *Cultural Heritage*: Investigation, Salvage, and Compensation Protocol.
4. *In-situ Management*: This option entails the installation of site protection measures such as fences or barricades, as well as the filling in of the site area.
5. Appropriate protective measures shall be determined and agreed upon on a site-by-site basis between the contractor, the client, and the National Museum, NCCA, and NHCP. If this is the best choice but is likely to result in some site damage (e.g., during the process of covering the site area with a fill), it may be paired with limited salvage excavation.
6. If a site is determined to have low salvage excavation potential but includes substantial surface archaeological artifacts, those artifacts may be individually mapped and gathered in line with the Cultural Heritage: Investigation and Salvage Protocol.
7. If a site is determined to have minimal archaeological importance, it may be destroyed following the completion of a comprehensive photographic record and the Chance Finds Report Form.

6.6.5.5 *The Cultural Heritage Concept and Its Subcategories*²⁵

R.A. No. 10066 establishes the following working definitions for essential topics pertaining to national cultural heritage (Article II, Section 3 - Definition of Terms):

The term "cultural legacy" refers to the sum total of cultural property that has been conserved and developed over time and handed on to future generations.

Cultural property includes all works of human creativity that reveal a people's or nation's identity, such as churches, mosques, and other places of religious worship, as well as school and natural history specimens and sites, whether public or privately owned, movable or immovable, tangible or intangible.

Tangible cultural property includes artifacts and noteworthy natural history items with historical, archival, anthropological, archaeological, aesthetic, and architectural significance, as well as property with remarkable or traditional production, whether or not of Philippine origin.

Intangible cultural property refers to people's learned processes, as well as the knowledge, skills, and creativity that inform and develop their products, as well as the resources, places, and other components of their social and natural environment that are important for their sustainability.

Intangible cultural heritage includes behaviors, representations, expressions, knowledge, and abilities, as well as the instruments, objects, and artifacts that communities, groups, and people

²⁵ https://ncca.gov.ph/wp-content/uploads/2020/08/WebPosting_Cultural-Mapping-Toolkit.pdf



acknowledge as part of their cultural history. These include oral traditions, languages, and expressions; performing arts; social activities, rituals, and celebratory events; and knowledge and practices about nature and the universe.

Additionally, R.A. No. 10066 (in Section 3 I defines the various categories of the country's major cultural characteristics as defined in the following definition of terms:

Nationally significant values are those that are historical, artistic, scientific, technological, social, and/or spiritual in nature and that bind the nation together via a shared feeling of pride in their diverse yet common identities, cultural heritage, and national patrimony.

An important cultural property is one that possesses outstanding cultural, artistic, or historical importance for the Philippines, as recognized by the National Museum and/or the National Historical Institute (now the National Historical Commission of the Philippines).

National cultural treasures are one-of-a-kind cultural properties discovered locally that have exceptional historical, cultural, artistic, and/or scientific value, are highly significant and important to the country and nation, and have been officially designated as such by the appropriate cultural agency.

Historical shrines are designated by the National Historical Commission of the Philippines as historical locations or constructions that are sanctified and honored for their history or relationship.

Historical monuments are constructions that honor notable individuals or memorialize significant historical events, as determined by the Philippine National Historical Commission.

Historical landmarks are locations or constructions linked with significant events or achievements in Philippine history, as determined by the Philippine National Historical Commission.

Natural properties of cultural value refer to regions protected by the National Integrated Area Protected System that have an exceptional environment with nationally significant flora and fauna (NIPAS)

6.6.5.6 *The Cultural Agencies and Their Conservation-Related Functions*²⁶

In accordance with the terms of Republic Act No. 10066, the cultural agencies and other national line agencies are obliged to assume obligations (Article VIII) for the classification and protection of the nation's different significant cultural properties.

The National Commission for Culture and the Arts (NCCA) is authorized to "control acts that are detrimental to the preservation/conservation of national cultural heritage/properties."

The National Museum (NatMu) must take the lead in studying and preserving the nation's vast artistic and cultural history, in reconstructing and rebuilding our past, and in developing the nation's cultural

²⁶ Ibid



treasure. Simultaneously, it is responsible for implementing and enforcing Presidential Decrees 260, 374, 756, 1109, 1492, 996, 1683, and 1726-A, as well as supervising the restoration, preservation, reconstruction, demolition, alteration, relocation, and remodeling of immovable properties and archaeological landmarks and sites.

The National Historical Commission of the Philippines (NHCP) shall approve the designation of historic structures and edifices as national shrines, monuments, and landmarks, or heritage houses, and shall regulate activities involving the preservation, restoration, and conservation of historical property or resources.



6.6.6 Chance Finds Protocols

6.6.6.1 Chance Find Procedures

The Client is responsible for identifying and designing a project that will not cause substantial cultural heritage harm. When a project's planned location is in an area where cultural heritage is likely to be discovered, the Client will use chance find methods outlined through the Social and Environmental Assessment or Cultural Heritage Impact Assessment (CHIA). The Client will not interfere with any subsequent chance discoveries until a qualified specialist has completed the assessment.

In the event of unanticipated discoveries of cultural or historical artifacts, (movable or immovable), on the course of the work, this must take all necessary measures to protect the findings. Procedures to be followed in case of discovery of artefacts are:

1. The external monitoring IP consultant will inform the Contractor to immediately cease operations at the site of discovery.
2. The external monitoring consultant will report the accidental discovery to the DPWH to notify the National Museum (NATMU), National Historical Commission of the Philippines (NHCP), National Commission on Culture and Arts (NCCA) and/or other concerned agencies for the next steps.
3. Recommence work only after the NATMU, NHCP, and NCCA has provided official recommendation accordingly.

6.6.6.1.1 Purpose of the Chance Find the Procedure

The chance find protocol is a project-specific method that describes what to do if previously unknown historic resources, particularly archaeological resources, are discovered during the building or operation of a project. A Chance Find Procedure is a method that protects accidental findings from being destroyed until an archaeologist has assessed them and taken measures in preserving and conserving the finds that are also consistent with the requirements.

6.6.6.1.2 Scope of the Chance Find Procedure

This method applies to any operations carried out by personnel, including contractors, that might lead to the discovery of an archaeological or historical object, structure, or place. The process outlines what to do if a previously unknown and potentially archaeological and historical object, structure or place is discovered during any earth-moving activities in relation to the development. The procedure defines the duties and responsibilities of project staff as well as any applicable heritage authority.

6.6.6.1.3 Induction/Training

All personnel, especially those working on earth movements and excavations, are to be inducted on the recognition and identification of potential heritage items/sites and the relevant actions for them with regards to this procedure during the Project induction and regular toolbox talks.



6.6.6.1.4 *Chance Find Procedure*

If an archaeological or historical object, structure, or place is discovered during excavation or construction, such as (but not limited to) remains and artifacts, or a cemetery and/or individual graves, the following procedures must be followed:

1. Immediately stop any construction in the area of the discovery and cordon the area;
2. Document the finds (photographs);
3. Notify a foreman right away. The foreman will then inform the Construction Manager and the Environment Officer (EO)/Environmental Manager (EM) of the scenario.
4. Write a report of the incidental finds and seek guidance from the respective personnel particularly the in-house archaeologist/anthropologist until a solution for the preservation of the artifacts has been prepared;
5. Take photographs of the find and record the details in the Incident Report.
6. Define the discovered site or region and secure it to protect any harm or loss of removable items. A night guard must be appointed in situations of removable artifacts or sensitive remains until the appropriate local authorities and respective personnel take control;
7. The in-house Archaeologist and Anthropologist must conduct a preliminary assessment of the findings.
8. To evaluate the significance of the site or find, the archaeologist and anthropologist must perform a quick evaluation. The appropriate strategy may be implemented based on the results of this assessment.
9. Minor significance sites (such as isolated or uncertain features, and isolated finds) should be recorded as soon as possible by the archaeologist, causing the lowest impact of disruption to the Contractor's work schedule. Once finished, every archaeological work must be reported to the National Museum of the Philippines (NatMu), National Historical Commission of the Philippines (NHCP) Institute, and National Commission for the Culture and the Arts (NCCA).
10. If a major find is discovered, the Archaeological Impact Assessment (AIA) team should be notified immediately.
11. The appropriate authorities will make the decision on how to handle the find. This might involve alterations to the design (such as when finding an irremovable remain of cultural or archaeological importance) conservation, preservation, restoration, and salvage are all terms used to describe the process of preserving, restoring.
12. Construction activity might resume only if the competent authorities give their authorization.

6.6.6.2 *Consultation*

A project may affect cultural heritage. The Client should consult with affected communities within the host country who use, or have used within living memory, the cultural heritage for longstanding cultural purposes. The Client will consult with the affected IP communities to identify the cultural heritage of importance and incorporate into the Client's decision-making process the views of the affected communities on such cultural heritage. A consultation will also involve the relevant national or local regulatory agencies entrusted with the Protection of cultural heritage.



6.6.6.3 *Community Access*

Based on consultation with affected IP communities and subject to health, safety, and security considerations, the Client should allow continuous access to cultural sites or provide an alternative access route for the project site that contains cultural heritage used by the affected IP communities.

6.6.6.4 *Removal of Replicable Cultural Heritage*

If the project involves replicable tangible cultural heritage (but not critical), the Client will apply mitigation measures that favor the avoidance of removal. When this is not avoidable, the Client will implement the following mitigation hierarchy:

- The Client will minimize adverse impacts of the project and apply *in-situ* restoration measures. This should ensure maintenance of the value and functionality of the cultural heritage, including any supporting ecosystem.
- If on-site restoration is not feasible, the Client will restore the functionality of the cultural heritage at a different location, including the supporting ecosystem processes.
- When the project involves permanent removal of historical and archaeological artifacts and structures, the Client will carry out the process by the requirements in this Principle.
- The Client will compensate for the loss of tangible cultural heritage when it can be demonstrated that minimization of adverse impacts and restoration to maintain the value and functionality of the cultural heritage is not feasible and where the Affected Communities use tangible cultural heritage for longstanding cultural purposes.

A chance finds the procedure is a project-specific procedure that outlines the actions taken if previously unknown cultural heritage is encountered.

6.6.6.5 *Replicable Cultural Heritage*

It is a tangible form of cultural heritage that can be moved to another location or replaced by a similar structure or natural features to which appropriate measures can transfer cultural values. The Client can consider archaeological or historical sites as replicable if other sites and structures represent the particular eras and cultural values.

6.6.6.6 *Removal of Non-Replicable Cultural Heritage*

Most cultural heritage is best protected by preservation since removal is likely to result in irreparable damage or destruction of the cultural heritage. The Client will not remove any nonreplicable cultural heritage unless the following conditions are met:

- There are no technically or financially feasible alternatives to the removal.
- The overall benefits of the project outweigh the anticipated cultural heritage loss from the removal.
- The best available techniques and experts conduct any removal of cultural heritage in archaeology and anthropology.



6.6.6.7 *Critical Cultural Heritage*

Critical cultural heritage consists of one or both of the following types of cultural heritage:

- the internationally recognized heritage of communities who use, or have used within living memory the cultural heritage for longstanding cultural purposes; and
- legally protected cultural heritage areas, including those proposed by host governments for such designation.

The Client will not significantly alter, damage, or remove any critical cultural heritage. In exceptional circumstances, where a project impacts on critical cultural heritage are unavoidable, the Client will:

- meet the requirements above; and
- conduct a good faith negotiation with and document the informed consultation and participation of the affected communities and the successful outcome of the talks.

The Client will retain external experts to assist in the assessment and Protection of critical cultural heritage. Legally protected cultural heritage areas are essential for the Protection and conservation of cultural heritage. Additional measures are needed for any projects that would be permitted under the applicable national laws in these areas.

In circumstances where a proposed project is located within a legally protected area or a legally defined buffer zone, the Client, in addition to the requirements for critical cultural heritage, Client should meet the following requirements:

- Comply with defined national or local cultural heritage regulations or the protected area management plans.
- Consult the protected area sponsors and managers, local communities, and other critical stakeholders on the proposed project; and
- Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area.

Non-Replicable cultural heritage may relate to the social, economic, cultural, environmental, and climatic conditions of past peoples, their evolving ecologies, adaptive strategies, and early forms of environmental management, where the:

- cultural heritage is unique or relatively unique for the period it represents, or
- cultural heritage is special or relatively unique in linking several periods in the same site.

6.6.6.8 *Project's Use of Cultural Heritage*

Where a project proposes to use the cultural heritage, including knowledge, innovations, or practices of local communities embodying traditional lifestyles for commercial purposes, the Client will inform these communities of:

- their rights under national law.



- the scope and nature of the proposed commercial development; and
- the potential consequences of such development.

6.6.7 Climate Change Adaptation Disaster Risk Reduction Assessment

The incorporation of climate change adaptation and disaster risk reduction concerns in the PEISS is guided by EMB Memorandum Circular 005 s 2011 (Incorporating Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) concerns in the Philippine EIS System) and its Technical Guidelines. With this issuance the EIS/IEE screening form used by the Bureau has been modified to include CCA and DRR concerns early into the EIA process. The succeeding section describe the integration of CCA and DRR concerns in the EIA process:

The DRR/CCA-enhanced EIA is a tool for ensuring that future developments (e.g., projects) are resilient and that their environmental impact do not exacerbate natural hazards or climate change's effects on human or natural systems. It should also be noted that the integration of DRR and CCA considerations into the EIA process requires no change to the essential steps or sequence of the EIA process itself.

6.6.7.1 Basic Project Considerations

In the initial project definition and description, there is a need to determine if natural hazards and climate change are likely to be potential considerations in the EIA process. Factors influencing this decision include:

- the nature of the project and its setting;
- the life of the project;
- natural hazard and climate-related parameters likely to influence the critical environmental receptors and the project;
- anticipated changes to these parameters over the life of the project;
- applicable regulatory requirements, guidelines and expectations.

At this stage, the principles of *precautionary approach* should be applied in incorporating DRR/CCA into the EIA process. The precautionary approach recognizes that the absence of full scientific certainty should not be used as a reason to postpone decisions where there is a risk of serious or irreversible harm, and that precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.

6.6.7.2 Project Screening

Screening of projects for coverage and EIA Requirement under the Philippine EIS system involves the consideration of the project type (i.e., ECP) and thresholds as well as its location in Environmentally Critical Areas (ECAs).

Conceptually, projects would undergo additional screening by determining if their environmental impact are highly likely to contribute to increased vulnerability to natural hazards and climate change. These



impacts would be site-specific, typically reversible and, in most cases, risk reduction/mitigation measures could easily be incorporated in the EMP/EMoP.

Under the *EIA DRR/CCA Technical Guidelines*, the screening process would be strengthened with the use of hazard maps generated by mandated agencies (e.g., PHIVOLCS, MGB) and funded projects (e.g., READY Project). The screening process is further refined with the use of the climate change projections generated by PAGASA.

6.6.7.3 Project Scoping

This stage of the process is critical as it defines the scope of the EIA to be required. EIA reports should, in general, present detailed information concerning the nature, scope, setting (legal, financial, institutional) and timing for the proposed project or activity. The level of information that may be required shall be within what is relevant and available at the Feasibility Study Stage – specific detailed engineering design shall not be required. The project description to be submitted for purposes of scoping should contain sufficient information to frame the scope of the EIA investigation so that time and resources are focused on relevant issues.

It is important to note that scoping simply indicates whether or not there is concern. It does not determine the extent of an effect, or whether an effect will actually occur. Public concern raised at a meeting is sufficient at this stage to flag an issue as important enough to be included in the scoping task. It is at this stage that scoping must also determine whether natural hazards and/or climate change is/are relevant and should be included in the EIA – whether in relation to potential changes to the environment, or in consideration of the effects of the environment on the project.

Scoping must consider both natural hazards and climate change in relation to:

- **Project design criteria** – review and justify current project design criteria and code-related issues (i.e., regulatory requirements such as safety, structural) with respect to predicted climatic changes and to the physical environment over the life-span of the project. If necessary, amend the project design criteria appropriately and/or apply modified design factors to the project.
- **Ecological, socio-economic and physical factors** – determine possible changes and/or additions to critical environmental receptors to be studied (e.g., health and safety, or pathways) due to natural hazards and/or climate changes over the life-span of the project, and incorporate them into the EIA process. This also includes possible physical environmental factors that might affect the project.
- **Environmental impact** – identify possible environmental impact (including cumulative effects, if appropriate) based on effects associated with natural hazards and/or climate changes being considered for the life-span of the project.

Note that the integration of natural hazards and climate change into the EIA process should not necessarily require modification of existing regulatory requirements, best practices or performance standards, which would be outside of the scope of an EIA. In addition, it is important not to shift liability or introduce unreasonable costs into the EIA process. However, it is important to consider the effects

of natural hazards and the implications of the frequency and intensity of climatic extremes, for example, and their effects on both the project and its potentially modified impact on the environment.

Under the *EIA DRR/CCA Technical Guidelines*, the scoping would ensure that description of the project/activity includes the identification of environmental or social issues of concern as well as any natural hazards and climate change vulnerabilities at the project level. One potential mode of integration is the assessment of issues especially with regards to the historical and projected occurrence of tropical cyclones and other extreme climate events in the proposed project location that may affect project design, construction, implementation or abandonment.

Examples of integration schemes for disaster and climate change risk are as follows (especially for projects located in hazard-prone areas):

- **Energy** – impact of hydropower projects on natural water flow and flooding patterns.
- **Transport** – impact of road construction and associated infrastructure on drainage systems and flooding patterns.
- **Urban development** - impact of development on the capacity of services and utilities to prevent increased risk of flooding as could occur if, say, drainage systems are inadequate or garbage collection services are limited, resulting in dumping of garbage in drainage systems or waterways.
- **Mining** – implications for droughts and floods from impact of mining operations on level of groundwater.
- **Agriculture** – impact on soil erosion and consequences in terms of levels of water retention, downstream siltation and flooding. Resilience of proposed projects in the event of rainfall excesses or deficits.
- **Fisheries** – consequences of clearance of mangroves and other vegetation.
- **Forestry** – risk reduction benefits of forestry projects (e.g., in providing protection against windstorms, landslides or tsunamis and reducing the risk of flash flooding).

6.6.7.4 Impact Analysis

In general, the EIA process requires a detailed identification of significant impact. Determining whether an impact is significant is a critical step in an EIA, and it is necessary to identify the criteria on which this decision is based.

Traditional EIA typically views the environment in its current state, usually based on a seasonal analysis of conditions (e.g., wet and dry seasons). The existing status of each environmental receptor is characterized, and project activities are then analyzed vis-à-vis the existing environment to determine the impact.

Incorporating natural hazards and climate change impact requires a paradigm shift from this perspective, as the existing environment can no longer be viewed as a constant and separate from project effects. In fact, a specific analysis of the potential changes associated with natural hazards

and/or climate change will be required before the impact of project activities can be isolated and assessed. The essence of the EIA process does not change. Effects on the environment with and without the project are still determined, and the existing definitions of significance should be used to evaluate the impact of the project after climate change considerations had been integrated.

EIA, being ideally conducted at the project planning stage has a lot of uncertainties, thus the need to consider options and alternatives. The analysis of environmental impact shall consider range of assumptions on production capacity, areas of development, process technologies, emissions, discharges and other wastes. Under this DRR/CCA-enhanced guidelines, the PAGASA climate projections for 2020 and 2050 in the province where the project is to be located should be integrated in the project impact analysis. Examination of the consequences of climate variability and changes as well as the effectiveness, costs and feasibility of adaptations that can reduce vulnerability at the project level shall also be included in the impact analysis

Ideally, the EIA shall consider the potential effects of the project (during construction, operation and, if relevant, decommissioning) on the frequency, intensity and consequences of significant natural hazards and the impact of these hazards, in turn, on the project. The assessment should take into account relevant natural hazards and climate change concerns (e.g., how a rise in sea level might affect storm surges or how changes in precipitation might affect drought and flooding). In some cases, findings of mathematical and computer-based hazard modeling exercises in the project area (for instance, modeling of earthquake, flood or windstorm) should be used. Such exercises, if not available, should be undertaken for large projects in high-risk areas.

On the other hand, the EIA process provides an excellent means to ensure that environmental effects on the project are considered and factored into project decision-making. Possible adverse effects of the environment (in terms of natural hazards and/or climate change) on the project may include:

- destruction of the project or components of the project;
- negative impact to the operation and productivity of the project;
- increase in cost of project development;
- revisions of project design;
- increase in maintenance frequency and costs, and
- requirement for future project modifications.

Potential effects of the environment on the design criteria shall be the primary concern of the project. Decisions on the project design criteria must be made in the context of the climate change projections over the lifespan of the project. Detailed analysis may not necessarily be done during this assessment, but the source of climate predictions and their specific magnitude must be described along with the rationale for accepting the design criteria. Overall, any adverse impact of extreme climate events on the project should be identified and the likelihood of their occurrence specified.

These assessments will help to determine if these effect/s is/are significant. If potential effects are deemed significant, appropriate management, mitigation and adaptation options must be identified. Furthermore, if it has been determined that a project is highly affected by climate change, a project-



level climate change adaptation program should be also developed to address significant impact and define project adaptation measures.

For projects that require an EIS, DRR/CCA-enhanced EIS Screening Forms provide lists of projected impact and corresponding baseline data requirement as well as prescribed assessment methodology and approach in consideration of the disaster and climate change vulnerability parameters relevant for specific types of projects. These pre-identified requirements shall be included as part of impact analysis of the EIA.

For projects where the IEE Checklist Report Form would suffice, pre-identified baseline data and impact analysis requirements as well as disaster risk reduction and climate change adaptation options are provided for particular project types to be filled-up/accomplished.

6.6.7.5 Impact Mitigation Planning

The impact mitigation section of the EIA report should consider the reduction or elimination of residual impact remaining after standard measures (such as installation of pollution control devices and erosion control techniques) have been applied. Note that standard mitigation through best management practices is typically an integral part of the project design.

Measures associated with disaster risk reduction and climate change will normally fall within this category and may include a range appropriate to the project and its setting. Mitigation, including any DRR/CCA measures, should remain focused on reduction or elimination of significant impact of the project on the environment as well as the effects of the disaster and climate change risk projections on the project.

The mainstreaming DRR/CCA in the PEISS is focused at the project level. As such, the assessment process should be limited to the impact of a project on natural hazards as well as effects of natural and climate hazards on the project. Likewise, risk reduction and adaptation measures should be appropriate for project level implementation.

6.6.7.6 Preparation of the Environmental Impact Statement (EIS)

As a process, the EIA is primarily used to identify potentially significant impact and formulate measures to reduce those impact to acceptable levels. The results of the process are documented in an environmental impact statement (EIS). The EIS is prepared in order to convey the results of the various analyses conducted during the EIA as well as to incorporate the management, mitigation and adaptation measures necessary to address natural hazard/climate change vulnerabilities and risks identified. The EIS should also be used to ensure that the program for monitoring project implementation and impact includes the assessment of effectiveness of these measures.

The nature, quality and quantity of data, impact assessment and management measures presented in the EIS shall include those that will be most useful and critical in the integration of environmental, social, climate risk reduction and disaster risk reduction concerns during the preparation and finalization of the Proponent's feasibility study and subsequent activities of the project such as detailed engineering design, construction, operation and decommissioning/abandonment.

For projects that require an EIS, DRR/CCA-enhanced EIS Screening Forms will serve as the checklist of information and analysis requirements identified during the scoping stage. For projects where the IEE Checklist Report Form would suffice, the duly accomplished/completed form serves as the EIA Report for the proposed project.

6.6.7.7 Review Process

The review process of the Philippine EIS System is premised on the criteria of:

- *Clarity.* The EIS document is intended to communicate the results of the EIA to a wide range of stakeholders including regulators, evaluators from various disciplines and professions, decision makers, affected communities, and the general public. It should therefore be written in such a way that it is easily understood.
- *Balance.* There are many ways by which balance can be gauged. An EIS document is balanced if it is devoid of bias in the presentation and analysis of data. It is not supposed to provide justifications for pre-conceived conclusions in favor of any interest group. Moreover, the EIS document should demonstrate a balanced treatment of descriptive and analytical discussion. Facts or data and their meaning or interpretation should be presented in tandem; one without the other will not withstand scientific scrutiny.
- *Accuracy and Precision.* These are universal criteria that need to be satisfied through scientific inquiry or investigation. All analytical data presented in the EIS should satisfy the prescribed levels of accuracy and precision as derived from established statistical tools and methods. Furthermore, all the baseline characterization methods (e.g., sampling, survey, testing procedures), as well as impact prediction tools and techniques (e.g., modeling techniques, field tests, laboratory experiments) used in the EIA study will be scrutinized not only for statistical, but also for scientific soundness.

Under the *EIA DRR/CCA Technical Guidelines*, the integration of DRR/CCA into the review process will also ensure that:

- All potentially significant environmental impact has been identified and analyzed. And, that the assessment considered both the climate change projections and the hazard potential in the proposed project location. Furthermore, the review process shall ensure that appropriate impact mitigation measures as well as climate change adaptation and disaster risk reduction has been formulated and analyzed based on agreements during the screening and scoping stages.
- The project proponent has committed to implement and incorporate in the project design the appropriate and sufficient impact management and mitigation measures as well as incorporate the appropriate climate change adaptation and disaster risk reduction considerations in the project design.

Project Monitoring and Evaluation

In the context of the PEISS, monitoring and evaluation is undertaken after the issuance of the Environmental Compliance Certificate (ECC) to determine whether predictions made in the EIA report were accurate. Furthermore, if disaster and climate change risks has been identified as potential



concerns, the M&E should include this consideration. Monitoring should focus on areas where potentially significant impact could occur, or where mitigating measures have been proposed.

The knowledge base for disaster risks and climate change in project-specific areas will normally improve substantially over the life of a project. It should also be noted that disaster and/or climate change risks are normally a long-term risk, hence may be difficult to assess in the short-term (i.e., project life). Thus, if a project is particularly sensitive to disaster risks and/or climate change over its predicted life, monitoring should include periodic assessment of these aspects by reviewing new information and/or monitoring specific hazard/climate elements. At the minimum, the evaluation should focus on the determination if the mitigating and/or adaptation measures that were put in place are effective and whether there were problems or excessive costs associated with them.

The compliance monitoring by the project proponent, validation by the MMT (if required) and the evaluation by the EMB should focus on confirming whether mitigating measures are performing as designed, or to identify changes needed to address the actual environmental impact of the project. This will show whether the project had achieved its objectives or had caused unintended adverse impact. In which case, it may be necessary to re-assess adaptation options, select new mitigation and/or adaptation measures or modify the current set of measures.

Annex 6-1: List of DENR Recognized Laboratory



7 SOCIAL ENVIRONMENT SAFEGUARDS IN OPERATION (THE PEOPLE COMPONENT)

7.1 Introduction

DPWH recognizes the importance of incorporating the social safeguards in the planning of infrastructure projects as these are essential tools to prevent and mitigate adverse impact to project affected persons during the project development process. Social safeguards are vital part of sustainable and accountable finance for infrastructure development because they establish clear rules and guidelines for staff on how to deal with social and environmental issues. Safeguards likewise establish the social acceptability and viability of the project, define measures and processes to effectively manage risks and enhance positive impacts. The process of applying safeguard policies can be an important opportunity for stakeholder engagement, enhancing the quality of project proposals and in increasing a sense of ownership.

The key issues addressed in social safeguards in this Section relate to (i) involuntary resettlement, (ii) participation and inclusion of indigenous peoples and vulnerable groups, (iii) gender issues and concerns and, (iv) and mitigation measures.

7.2 Social Impact Assessment

Social impact assessment is a process to identify and assess the social issues and concerns resulting from the infrastructure project. SIA is undertaken to (i) enhance project benefits and opportunities, (ii) minimize risks and mitigate adverse impact resulting from the project.

The SIA is not a standalone activity, some of its activities also interfaces with the environmental team to collaborate on sets of related tasks that are required to achieve the environmental and social objectives.

- Objective:** To incorporate the social dimension in the preparation of the environmental and social impact assessment.
- Timing:** Project identification, Feasibility and Detailed Engineering Design
- Deliverables:** Social Impact Assessment Report with supporting other documents: Minutes of public consultation reflecting issues and response, FGD's documentation and Report, List of attendees, and photos
- Lead Person:** ESSD-Supervising Environmental Management Specialist
- Support:** ESSD/REIAO, EIA Team Leader, IO Representative, ESSD Staff trained to use the Statistical Package for the Social Sciences (SPSS) or a similar statistical analysis software or Excel. Survey Team consisting of interviewers and a supervisor
- References:** DAO 2003-30, RA 10752
R.A. No. 7279 (UDHA Law), Article V, Sections 21 and 22.
Implementing Rules and Regulations of UDHA, Section 3, III (b.3.0)
Annex 4-1: Screening Table for Project Environmental and Social Impact



Activities:

- i. Conduct consultation with local residents
- ii. Gather primary and secondary data
 - a. Conduct survey of relevant features of the area (population trend, labor and employment, income profile, health indicators, sanitation)
 - b. Collect information and file data to establish baseline conditions
- iii. Quantify and characterize data collection
- iv. Analyze data
- v. Examine probable impacts (ex. displacement, health related issues, resettlement,)
- vi. Prepare recommended mitigation measures
- vii. Prepare social development plan, RAP and Gender Action Plan
- viii. List the parameters to be monitored
- ix. Prepare monitoring plan

7.3 Organizing the Social Safeguards Team

Overview: The social safeguards Team is part of the Project Team tasked to prepare the SIA that is fully compliant to the requirements of the Philippine Environmental System. The deliverables of the Social Safeguards Team integrate with the other related project components such as technical, economic, financial and institutional analyses. It is important that at the start for each project being proposed, the designated Safeguards Team and Support Team have to be established and tasked to conduct the social safeguards' requirements following the guidelines of the SEMS.

Objectives: Designate Social Safeguards Team to assess the social risks and impacts of the proposed project on the people

Timing: Pre-Feasibility, Feasibility, DED, Implementation Phase

Deliverables: Social Impact Analysis, Initial Design on Mitigation Measures

Lead Group: ESSD - Supervising Environmental Management Specialist- Lead Person
Social Safeguard Core Team from ESSD Team
ROW/Resettlement Specialist
Community Organizer/Research Assistants

Support ESSD/REIAO, EIA Team Leader, IO Representative, DEO

Reference: All applicable Annexes specified under the succeeding topics,



Procedures: During the preliminary analysis, the Social Core Team will review the social environment situation relating to the impact on the people and screen the project according to the scale of impacts (Category A, B, C).

- a) Review policy measures and identify gaps and recommend appropriate gap filling measures for the project compliant to both local and national social and environmental requirements.
- b) Conduct consultation using the recommended methods (FGDs) and keep records of issues raised and responses during meetings
- c) Conduct of perception survey, socioeconomic survey and analyze results, ensuring gender desegregation data (**Error! Reference source not found., Error! Reference source not found.**)
- d) Design of safeguard measures to prevent, mitigate and/or compensate for risks and impacts being identified, including taking advantage of positive impacts and any other opportunities as may be identified, both for the project itself and for communities being affected by the project.
- e) Support in advancing actions as foreseen to follow-up on social management measures, associated costs, capacity-building activities as well as implementing the safeguard measures according to schedules.
- f) Ensuring gender issues and concerns are addressed in the project mitigations
- g) Monitor and evaluate results of safeguard measures

7.4 Screening of Social Impacts

1. Screening of the infrastructure will take place during the identification and selection process, usually undertaken during the reconnaissance period. The Safeguard Team will determine the extent of impact using the map and identify impact areas both primary and secondary
2. Fill out the checklist in **Error! Reference source not found.** Example of potential adverse impacts
 - i. Involuntary resettlement of people and commercial communities
 - ii. Temporary nuisance during construction
 - iii. Inability of people to afford the resettlement housing cost for which there is a direct cost recovery
 - iv. Loss of income to people who are benefiting from their present economic activities.
3. Prepare an initial list of potential impacts such as physical displacement, potential loss of productive resources, number of people that may require involuntary resettlement, type of affected land (public, private or ancestral domain, forest reserved)



4. Screen the impact according to categorization (A, B, C, D -EMB Circular 2014-005) Section 1
5. Identify existing resources in the area, basic services, sources of water supply,
6. Interview Key informant or Barangay head who are residents of the area
7. Include women in the interview with key informants
8. List all perceived negative and positive impact as verbalized by the key informants
9. Identify extent of impact such as physical displacement, loss in productive and income assets,
10. Gender, ethnicity, and vulnerability impact will be appraised, and measures to mitigate them will be included in the preparation of safeguard measures.
11. List all persons met during the screening process
12. Take photos of the project scope,
13. Set an appointment with the local leaders for the next visit to conduct a consultation with various stakeholders

Table 7-1: Social Items to be Studied and Conceivable Impacts in Project Cycle

Social Items	Preconstruction/Construction Phase	Operational/Maintenance Phase
1. Population	Discuss the demographic data of impact area: <ul style="list-style-type: none"> • Number of households and household size • Land area, • Population, • Population density /growth • gender and age profile, • literacy rate 	Continuing population influx
2. Displacement of settler/s, housing and social services in the resettlement site.	<ul style="list-style-type: none"> • Describe briefly the involuntary resettlement based on the updated RAP. • Disruption of delivery of social services 	New additional houses and social services Reduced access of displaced families to previously existing social services
3. Transport Sector	<ul style="list-style-type: none"> • Mention the scope and magnitude of affected operators/drivers/other transport worker/vendors – validate this information with LTFRB • Discuss parking areas of PUV on feeder routes • Affordability of fares to commuters and sustainability of operators • What mitigations to ensure that fare is affordable for all social classes • Mitigation measures 	
4. Influx of workers, in migration	<ul style="list-style-type: none"> • Discuss the in-migration patterns as a result of project implementation 	



Social Items	Preconstruction/Construction Phase	Operational/Maintenance Phase
5. Economic activities	<ul style="list-style-type: none"> Economic activities in and around the project sites that might be disturbed temporarily or totally by the construction work and /or land acquisition (ex. Vendors, department stores, bank, etc. 	Economic activities will be revitalized by attracting new industries and improvement of the channel of distribution along the proposed BRT project; urban realm
6. Labor and employment	<ul style="list-style-type: none"> Generation of employment opportunity Changes in livelihood and income BRT job opportunities 	Increased employment Increased local tax revenues
7. Infrastructure and public utilities	<ul style="list-style-type: none"> Disruption of public utilities (what are these facilities?) Traffic congestion due to construction needs Local traffic flow might be disturbed temporarily by construction vehicles and construction works. Public facilities such as school and hospital in and around the project sites also might be affected. Access to schools and hospitals Discuss mitigations 	Improved accessibility Additional installation of public utilities Increased traffic hazards
6. HIV. Public Health and Safety	<ul style="list-style-type: none"> Contamination of surface water (if applicable) Increased occupational hazards associated with the project development Disposal of construction waste such as residue material and soil have to be treated carefully to avoid both natural and social environmental impacts for the disposal method and place shall be reviewed to identify potential impacts and propose measures Assess the health risks and potential impacts on the safety of affected communities during the design, construction, operation, and decommissioning of the Project. (Refer to the EMP) Observance of protocol on COVID 19 	<p>Increased solid waste</p> <p>New/additional health and safety facilities</p> <p>Prevention and treatment guidelines on HIV/AIDS for community/workplace will be prepared.</p> <p>HIV/AIDS prevention clauses will be incorporated into works contracts.</p> <p>There should be no discrimination or stigma against workers on the basis of real or perceived HIV status.</p> <p>Prevention programs on HIV by contractors will include education and information provision, peer counseling, condom use promotion and distribution, and facilitation of voluntary counseling and testing and support for behavioral change.</p> <p>Due care and confidentiality will be exercised in handling information on HIV status of workers bound by the rules of confidentiality set out in existing ILO instrument; and</p>



Social Items	Preconstruction/Construction Phase	Operational/Maintenance Phase
		Prevention programs on HIV by contractors will include education and information provision, peer counseling, condom use promotion and distribution, and facilitation of voluntary counseling and testing and support for behavioral change.
8. Gender Issues and concerns	<ul style="list-style-type: none"> Refer to Section 9 of SEMS 	

7.5 Stakeholder Identification, Analysis and Preparation

The procedures for the identification, analysis and engagement of stakeholders are specified in **Section 5.2.3.2**. This activity needs to be done simultaneously with the IEC in compliance with the DENR DAO 2017-15.

Identify the primary stakeholders who will be directly involved or affected by the project. These include relevant project proponents, local government agencies, project affected persons, business interest groups, primary users of the facilities, women, school children, local leaders, etc.

The Project Team needs to also identify the stakeholders' and examine individuals and groups that may influence or be directly or indirectly affected by the project. Basic questions to be asked are "what are their mandates, resources and capacity that may be tapped for future linkages?"

7.6 Social Preparation and Public Consultation

Overview The public consultation procedure is an initial activity during the first level scoping to orient the people of the proposed project, gather feedback, prepare the communities, and set a schedule for the upcoming community activities related to social safeguard. The consultation process with project-affected groups and key stakeholders shall continue throughout the project construction and operation phases, as required, to address matters having a bearing on the ESIA/ESMP implementation and other concerns of affected people. A series of activities are specified below to achieve the social objectives of the project.

7.6.1 Conduct of Consultation/IEC with Local Residents/Stakeholders

Objective: To orient the people of the proposed project, gather feedback, and prepare the community and set a schedule for the upcoming community activities related to social safeguards.

Timing: First level Scoping, Pre- Feasibility, Feasibility stage

Deliverable: Public Consultation/IEC Report; List of Attendees, Photos

Reference: DENR DAO 2017-15, DO 152 series of 2017



Guidelines:

1. Based on DO 152 Section S. 2017, Sec. 2.5.5 conduct barangay Public Consultation Meetings (PCMs). PCMs must be held in each barangay that will be traversed by the project. Venues for PCMs must be at neutral grounds, such as barangay halls, day care centers, public schools, and the like. This is to avoid certain individuals or groups from maneuvering conditions to work for their personal interests. The following topics are considered mandatory during the PCMs:
2. Consultations should be based on inclusive and culturally appropriate processes to effectively engage and facilitate inclusion of impacted groups, disadvantaged and vulnerable groups, including women.
3. Include among others the project proponent, government agencies, project-affected persons, host communities, neighboring communities, and public and private organizations.
4. Ensure the participation of women in public consultation activities, in decision making and develop ownership of the project amongst the project beneficiaries
5. Document minutes of the meeting, signed list of attendees, take photographs, and prepare a Public Consultation/IEC Report.

7.6.2 Data Gathering

Objective: To establish the existing conditions of the human environment of the Project area which are to serve as baseline information for the planning of safeguard mitigation.

Timing: Feasibility Stage

Deliverables: Socio Economic Profile of PAPs, Inventory of losses, Master list of PAPs, with supporting FGDs documentation and Report List of attendees, Photos

Lead Person: Supervising Environmental Management Specialist

Support: ESSD/REIAO, EIA Team Leader, IO Representative, ESSD Staff trained to use the Statistical Package for the Social Sciences (SPSS) or a similar statistical analysis software or Excel.

Survey Team consisting of interviewers and a supervisor

References: **Error! Reference source not found.:** Perception Survey

Error! Reference source not found.: Socioeconomic Survey Form

Error! Reference source not found.: Criteria for Review of Social Aspects

Error! Reference source not found.: Checklist of Project Affected Persons and Assets

7.6.2.1 Review of Secondary Data

1. Use different relevant secondary sources (a) Barangay Profiles, (b) Socio-Economic Profile, (c) Comprehensive Land Use Plan, (d) Minimum Basic Need (MB) and other statistical information



on labor and employment, health situation, migration pattern and basic services. The latter could be taken from the National Statistic Coordinating Board (NSCB).

2. Review social policies and other related studies. These include the Constitution and Local Government Code, DAO 2003-30, RA 10752 and other relevant policies on social requirement, gender, and resettlement planning.
3. Collect information and file data to establish baseline conditions
4. Quantify and characterize data collection
5. Use the findings from secondary sources to draw out relevant features of the study area such as population trend, labor and employment, income profile, health indicators, sanitation, etc.

7.6.2.2 Perception Survey

Objective: To obtain the perceptions, issues, and concerns as well as recommendations of stakeholders in the project area

Timing: Feasibility Stage

Deliverables: Perception Survey Report with photo/video documentation

Lead Person: ESSD Social Dev Specialist - Team Leader

Support: IO Representative

Regional or District personnel knowledgeable in the local language to act as FGD Facilitator

Reference: **Error! Reference source not found.:** Perception Survey

Procedures/Activities:

1. The procedure assumes that all the households within the direct impact area are to be covered in the survey. These households are usually those settled along the right-of-way and should have been identified before the survey. No instruction in taking a random sample from a population is therefore needed.
2. For the purposes of the EIA baseline characterization, a 20% of total the number of households of the host barangay or sample size using the Slovin's Formula may be used.
3. The perception survey is normally conducted as part of the baseline data gathering for an EIA but may also be carried out as part of the planning process using a different sampling protocol.
4. Use the Reference specified in Perception survey questionnaire (**Error! Reference source not found.**) and detailed steps in **Error! Reference source not found.:** Perception Survey Guide
5. Document the perception survey results which include the anticipated social impacts of the proposed project, as well as peoples' views, perception and obtain issues and concerns related to the proposed Project.



7.6.2.3 Key Informant interview

Overview: Key informants help in establishing the perceptions, needs and socioeconomic trends of the local community. This activity serves to validate the extent to which it will address the needs and demands of the community, indicate social acceptability and support for the project. They also help in mobilizing community resources and influence support

Objective: Gain perspective and local support on the proposed project among the stakeholders

Timing Feasibility Study stage

Deliverable: Key Informants Interview Report; List of Persons Met

Lead group ESSD - Supervising Environmental Management Specialist

Support DEO, REIAO

Reference: **Error! Reference source not found.:** Key Informant Interview Guide

Procedures

1. Prepare an interview guide (See **Error! Reference source not found.:** Key Informant Interview Guide)
2. Identify key informants. Key informants must include heads of the barangays, institutions, households, local leaders, NGOs. Include women as key informant
3. Conduct interviews using the interview guide
4. Record all answers based on your questionnaire
5. Check for reliability and validity

7.6.2.4 Socio-Economic and Inventory of Assets

The conduct of inventory of land and assets becomes necessary when during the scoping stage, the project is determined to likely cause involuntary resettlement. The conduct of the inventory on land and assets will be undertaken simultaneously with the perception survey, headed by Project Proponent, ESSD or by the Resettlement Specialist hired for the project.

The census and inventory will be administered to 100% of PAFs living within the IROW of the road project or within the scope of land to be acquired for the project.

Use the information and survey forms for socioeconomic and inventory forms specified in **Error! Reference source not found.** for details on the inventory of assets.



7.6.2.5 Focus Group Discussion (FGD)

- Overview: FGDs are intended to allow stakeholder groups and their representatives to air their concerns and opinions about the project. Expected to participate in FGDs are people other than the Project-Affected Persons (PAPs), who will be covered by the perception survey.
- Objective: To involve stakeholders in the planning, decision making and solving issues problems related to the project that may affect them
- Timing: Feasibility Study
- Deliverables: FGD Report with photos/videos documentation
- Lead Person: ESSD Social Dev Specialist - Team Leader
IO Representative
- Support: Regional or District personnel knowledgeable in the local language to act as FGD Facilitator
- Reference: Focus Group Discussion Guide
- Procedure:

7.6.2.6 Preparing for the FGD

Together with Regional/District personnel:

- a) Draw up a list of 6 to 10 FGD participants who shall represent varied local stakeholder groups, including the concerned LGU, NGOs, POs and/or IPs.
- b) Select a date and venue.
- c) Prepare and send out invitations to the selected stakeholder group representatives at least two weeks before the FGD.
- d) Make arrangements for food and equipment.
- e) Meet with the FGD team (Facilitator and Documenters) for orientation on the objectives, process/procedures, FGD Guide, and functions of the team members.
- f) If necessary, translate the FGD questions (refer to FGD Guide) into the local language of the project area.
- g) Two days before the FGD, check whether the arrangements are in order and confirm the FGD participants' attendance.
- h) On the day of the FGD, come to the venue two hours earlier to make a last-minute check on arrangements made.
- i) Immediately before the FGD is conducted, ask participants to register their names, designations, organization they represent and their signatures.



- j) Facilitate the discussion using the FGD guide.
- k) Prepare an FGD report

7.6.2.7 Data Encoding

The quality of data gathered will determine the effectiveness and efficiency of the baseline information for planning purposes of mitigation measures.

- a) For encoding purposes, the use of software such as SPSS or excel could serve as a spreadsheet and create systematic process results.
- b) Tabulate the data. The analysis of the data is usually undertaken by a Supervising Environmental Management Specialist from ESSD which will serve as an information base for the social Impact Assessment.
- c) Draw a master list of affected households to reflect losses of residence, business premises and other improvement, loss of trees and crops. The data will be encoded using SPSS and or excel to form the database information of Project affected families.
- d) A Master List of PAPs will be drawn from the results of the Census and Inventory of Losses. This information will determine the scale of impact which will serve as a baseline for RAP planning and budgeting.

7.6.2.8 Data Analysis

Overview: The data analysis is carried out based on information collected from SES, Perception Survey and Focus Group Discussion and other information. The data analysis identifies and assesses the potential project impacts both positive and negative and identifies measures to maximize positive impact and minimize adverse impact. This information will also be used for establishing the baseline for monitoring during project implementation.

Objective: To analyze the impact of the project which is useful in determining the appropriateness, social acceptability and viability and prepare appropriate mitigation measures

Timing: Feasibility Study Stage

Deliverable: Social Impact Assessment Report - Aggregated data, desegregated by gender

Lead ESSD Supervising Environmental Management Specialist- Team Leader
IO Representative

Support: Regional or District personnel knowledgeable in the local language to act as FGD Facilitator

Reference: **Error! Reference source not found.:** Perception Survey

Error! Reference source not found.: Socioeconomic Survey Form

Error! Reference source not found.: Criteria for Review of Social Aspects



Error! Reference source not found.: Checklist of Project Affected Persons and Assets

Procedures:

- a) Screen and identify project impacts by filling out information in **Error! Reference source not found.**
- b) Analyze results of data information from **Error! Reference source not found.** to **Error! Reference source not found.**
- c) Identify and fill out a checklist on possible social impact and mitigation measures.
- d) Incorporate the results on FGDs and consultation meeting, results on perceptions survey and Socioeconomic survey (SES)
- e) Prepare a narrative statement or report on the information gathered from various annexes to firm up the social analysis.

Annex 7-1: Perception Survey

Annex 7-2: Socioeconomic Survey Form

Annex 7-3: Criteria for Review of Social Aspects

Annex 7-4: Checklist for Potential Social Impact

Annex 7-5: Checklist of Project Affected Persons and Assets

Annex 7-6: Key Informant Interview Guide

Annex 7-7: Perception Survey Guide

Annex 7-8: FGD Guide



8 RIGHT- OF- WAY ACTION PLAN

8.1 Introduction

Over the years, the evolution of policies relating to land acquisition and resettlement has been under significant progress to ensure that the policy meets the requirements of the government as well as projects requiring international funding.

To ensure uniformity of standards in the Resettlement Planning, LARR was revised to integrate the Department's Indigenous Peoples Policy based on the Indigenous Peoples' Right Act (IPRA) and NCIP Administrative Order No. 1, Series of 2006 or the Free and Prior Informed Consent Guidelines of 2006.

1999	Land Acquisition, Resettlement and Rehabilitation (LARR) Policy	Formulated specifically for the national Road Improvement and Management Program (NRIMP)- Phase, WB.
2004	Revised LARR policy (2 nd Edition)	Revised the LARR for the project under the Sixth Road project,
2006	Revised LARR Policy 3 rd Edition	Revised LARR Policy integrating the Indigenous Peoples' Policy based on the Indigenous Peoples' Right Act (IPRA) and NCIP Administrative Order No. 1, series of 2006 or the Free and Prior Informed Consent Guidelines of 2006.
2017	DPWH ROW Acquisition Manual	Formulated in accordance with the provisions of the RA No. 10752, as guide on the rules and procedures for the acquisition by the DPWH ROW. The DRAM was approved on 07 March 2016 and became effective on 03 April 2016. RA 10752 repealed the previous ROW Act (RA 8974).

The DRAM covers the entire ROW acquisition process – including (a) Project Feasibility Study with Environmental Impact Assessment and preparation of Preliminary ROW Action Plan (RAP) with property appraisal, (b) inclusion of the Project in the Medium-Term Infrastructure Program, (d) provision of appropriations in the General Appropriations Act (GAA), (e) Fund Release, (g) Detailed Engineering Design (DED) including Parcellary Surveys and preparation of Final RAP, (h) RAP Validation, (i) Actual ROW Acquisition through Donation, Negotiation, Expropriation, and Other Modes, (j) Payments, (k) Transfer of Title to the Republic, (l) Clearance of ROW, and (m) Management of ROW.

8.1.1 National Legal Framework

There are several laws and Department Orders that govern the acquisition and management of ROW for infrastructure projects as embodied in the DRAM. These are specified in the Table below.



Table 8-1: National Policies on ROW Management

Issuance	Title	Issued On
RA 2874	The Public Land Act Amend and compile laws relative to lands of the public domain and or other purposes <i>as amended by Acts Nos. 3164, 3219, 3346, and 3517</i>	1919 Jul 01
Commonwealth Act (CA) No. 141 of 1936	The Public Land Act An Act to amend, compile the laws relative to Public Domain	1936 Nov 07
RA 386	Civil Code of the Philippines An Act to ordain and institute the civil code of the Philippines	1949 Jun 18
RA 6389	Code of Agrarian Reforms of the Philippines An Act Amending Republic Act Numbered Thirty-Eight Hundred and Forty-Four, As Amended, Otherwise Known as the Agricultural Land Reform Code, and for Other Purposes An Act facilitating agrarian reforms (Section 7, agricultural leasees are entitled to receive compensation equivalent to five times the average gross harvest)	1971 Sept 10
PD 757	Creating the National Housing Authority and Dissolving the Existing Housing Agencies, Defining its Powers and Functions, Providing Funds Therefor, and For Other Purposes	1975 Jul 31
BP 220	An Act Authorizing the Ministry of Human Settlements to Establish and Promulgate Different Levels of Standards and Technical Requirements for Economic and Socialized Housing Projects in Urban and Rural Areas from Those Provided Under Presidential Decrees Numbered Nine Hundred Fifty-Seven, Twelve Hundred Sixteen, Ten Hundred Ninety-Six and Eleven Hundred Eighty-Five	1982 Mar 05 1982 Jun 11 (promulgated)
RA 7160	Local Government Code of 1991 An Act Providing for a Local Government Code of 1991	1991 Oct 10
RA 7279	Urban Development and Housing Act of 1992 An Act to Provide for a Comprehensive and Continuing Urban Development and Housing Program, Establish the Mechanism for its Implementation, and for other Purposes	1992 March 24
RA 8371	An Act to Recognize, Protect and Promote the Rights of Indigenous Cultural Communities/Indigenous People, Creating a National Commission of Indigenous People, Establishing Implementing Mechanisms, Appropriating Funds Therefor, and for Other Purposes	1997 Oct 29
RA 9397	An Act Amending Section 12 of Republic Act No. 7279, Otherwise Known as the Urban Development and Housing Act of 1992, and for Other Purposes	2007 Mar 18
DPWH DO 2001-147	Authority for DPWH Regional Directors and District Engineers to Hire Private Surveying Firms	2001 Aug 22
DPWH DO 2002-187	Strict Compliance to Inclusion of preparation of Parcellary Plans and Cost Estimates for ROW Acquisition in Detailed Engineering of Infrastructure Projects (Appendix 4)	2002 Aug 08
DPWH DO 2006-327	Guidelines for Land Acquisition and Resettlement Action Plans (LAPRAPs) for Infrastructure Projects	2006 Dec 30



Issuance	Title	Issued On
DPWH DO 2007-34	Simplified Guidelines for the Validation and Evaluation of Infrastructure Right-of-Way Claims	2007 May 29
DPWH DO 2014-133	Return/Transfer of Functions Relative to Acquisition of Right-of-Way to the Legal Service	2014 Nov 28
DPWH DO 2016-151	Prescribing the Use of DPWH Procurement Manual	2016 Jul 15
DPWH DO 2016-203	Creation of Unified Project Management Office Right-of Way (UPMO-ROW) Task Force	2016 Oct 14
RA 10752	An Act to Facilitate the Acquisition of Right-of-Way Site or Location for National Government Infrastructure Projects and for Other Purposes (2016)	2016 Mar 07
Committee for the Preparation of the IRR of RA 10752	Implementing Rules and Regulations of RA 10752, An Act to Facilitate the Acquisition of Right-of-Way Site or Location for National Government Infrastructure Projects	2016 Jun 30
DPWH DO 2017-70	Implementation of Documents Tracking System for Civil Works Projects, as amended by DOE-DPWH Joint Circular, Relocation of Electric Cooperative Lines	2017 May 25
DPWH DO 2017-152	DPWH ROW Acquisition Manual	2017 Dec 21
RA 11201	Department of Human Settlements and Urban Development Act An Act Creating the Department of Human Settlements and Urban Development, Defining its Mandate, Powers and Functions, and Appropriating Funds Therefor	2019 Feb 14
HLURB / HUDCC	The Implementing Rules and Regulations of Republic Act No. 11201, Otherwise Known as the "Department of Human Settlements and Urban Development Act	2019 Jul 19
DAO 2018-17	Amending Section 11 of DAO No. 2007-29 or the Revised Regulations on Land Surveys	2018 Jul 19
DPWH DO 2019-110	Clarifying and Amending Department Order No. 65, Series of 2017, and Amending Department Order No. 56, Series of 2019, on Infrastructure Right-Of-Way (ROW) Matters."	2019 Oct 15
DPWH DO 2019-142	Clearing of Structures/Improvements, Trees and Crops within the Right-of-Way Limits of Projects.	2019 Dec 17
DPWH DO 2020-38	Creation of Unified Project Management Office - Right-Of-Way (UPMO-ROW) Legal Task Force	2020 May 06
DPWH DO 2020-43	Guidelines for Right-of-Way (ROW) Acquisition and Payment of Ancestral Domain Affected by the Implementation of National Government Infrastructure Projects	2020 May 29

8.1.2 Safeguard Requirements of International Funding Agencies

Most International Financing Institutions (IFIs) require the application of safeguards to approve projects, international policies on safeguards forms the guiding principles as part of the covenant signed between the government and the funders which must be complied by the borrower countries.

International Funding institutional like ADB, World Bank and JICA have specific requirements for social safeguards and provide support to borrowing countries for strengthening capacities of staff to meet these requirements. The preparation requires examination of the relevant national regulations and laws designed to protect people or to provide compensation against negative impacts.

Table 8-2: International Policies on Social Safeguards and their Policy Objectives



International Funding Institutions Policy Objectives	Classification and Requirement		
	Cat A- Significant	Cat B - Less Significant	Cat C -Not significant
World Bank OP 4.12 Avoid or minimize involuntary resettlement and where this is feasible, assist displaced people in improving or at least restoring their livelihoods and standards of living in real terms relative pre-displacement level or to levels prevailing prior to the beginning of project implementation whichever is higher	>than 200 persons displaced and/or requiring shifting of dwelling structure <ul style="list-style-type: none"> • EIA • Full RAP • IPP • Information disclosure 	1-200 persons or minor impacts, no shifting of dwelling structures <ul style="list-style-type: none"> • EIA • Abbreviated RAP • IPP • Information disclosure 	<ul style="list-style-type: none"> • EIA • RAP • IPP • Info disclosure
Asian Development Bank – Safeguard Policy Statement (SPS) Involuntary resettlement should be avoided where feasible. Where population displacement is unavoidable, it should be minimized by exploring all viable project options. People unavoidably displaced should be compensated and assisted, so that their economic and social future would be generally as favorable as it would have been without the project. People affected should be fully informed and consulted on resettlement and compensation options. Involuntary resettlement should be conceived and executed as part of the project	<ul style="list-style-type: none"> • EIA • RAP • IPP • Information disclosure 	<ul style="list-style-type: none"> • EIA • RAP • IPP • Information disclosure 	<ul style="list-style-type: none"> • EIA • RAP • IPP • Information disclosure
Japan International Coordinating Agency (JICA)	<ul style="list-style-type: none"> • EIA • RAP • IPP • Information disclosure 	<ul style="list-style-type: none"> • EIA • RAP • IPP • Information disclosure 	<ul style="list-style-type: none"> • EIA • RAP • IPP • Information disclosure

8.1.3 Gap Analysis and Harmonization of Resettlement Policies between National Government and IFIs

Although the governing laws and policies in the country significantly meets the requirements of the IFIs, some gaps are still unavoidable. These gaps are oftentimes addressed in the RAP documents as “gap filling measures”. Where there are gaps or conflicts in the resettlement policy under the IFIs funded project, the IFIs policy shall prevail which is specified in the covenant undertaking. These common gaps usually are addressed by providing “gap filling measures” to harmonize the policies between the Philippine Government and foreign funded projects. See Annex 8.1 Gaps and Harmonization of Policies in Involuntary Resettlement.



8.2 Organizing the RAP Team

Overview: During the project scoping, once it is ascertained that the project will trigger land acquisition and displacement of people, the conduct of inventory of land and assets becomes necessary. At this stage, the social safeguards/RAP Team has to be organized to prepare the preliminary ROW Action Plan following the DRAM guidelines.

Objective:

1. Designate a Social Safeguards/RAP Team to assess the social risks and impacts.
2. To prepare a cost effective and culturally acceptable Right of Way (ROW) RAP report.

Timing: Pre-Feasibility, Feasibility, DED, Implementation Phase

Deliverables: Feasibility Stage - Preliminary RAP; DED - Final RAP, Validated RAP (based on DED)

Lead Group: RAP Team²⁷

- Technical Team for the ROW survey
- Planning Office Staff for Social survey²⁸
- Regional Legal Adviser

Support:

- Planning Service (PS)-ESSD and Project Preparation Division (PPD) for CO projects Planning and Design Division/Section (PDD/PDS) for RO/DEO projects
- Bureau of Design (BOD)/counterpart units in RO/DEO
- Bureau of Construction (BOC)/counterpart units in RO/DEO
- UPMO Cluster/PPPS staff concerned
- ROW Engineers
- Consultants

Reference/s: DPWH Right of Way Manual

Department Order (DO) No.5, s. of 2003; DO 327 s of 2003

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8.3 Preparing the RAP Report

This Section provides the outline in preparing the RAP report based on the DRAM and takes also into account the suggestions of the participants during the Workshop on Preparing the RAP Report and Monitoring Report²⁹.

²⁷ As Recommended by the Group members (Group1) during the Workshop on Preparing the RAP Report and Monitoring Report 1, August 16 -17 2021

²⁸ As much as possible a Sociologist will lead this group but ground reality shows the Planning Service are doing multiple tasks, including RAP preparation. There is also an issue on permanence and budget.

²⁹ Done virtually in August 26-27 2021 participated by the Regional DPWH representatives and ESSD staff.



Prior to the preparation of the RAP Report, it is assumed that all procedures and information are already available as specified in Section 7. In addition to the forms suggested in the DRAM, there are several attachments to this Section (simplified tables and forms) that are useful in preparing the RAP report. (See Annex 8-2 [Forms 8-1 to 8-8]).

The RAP Report is currently being prepared by the Planning Service (ESSD) and Project Preparation Division (PPD). However, for project with international funding, the Social Safeguard Consultant is responsible to prepare the RAP Report.

8.3.1.1 RAP Report: Outline and Contents

The Introduction part of the RAP report basically provides a brief description of the project, the rationale to justify the project and the objectives to be achieved.

- Introduction should be brief and concise.
- Should not be more than 3 paragraphs

8.3.1.2 Executive Summary

The Executive Summary is a condensed version of the whole RAP Report and will be usually read by the investors or funders of the project, partner agencies, evaluators and other agencies who has the responsibility to participate in funding other components of the RAP such as livelihood, resettlement sites, etc. Therefore, the Executive Summary needs to capture all relevant and key information in a clear, and concise manner, and should not be lengthy (up to a maximum of three pages). Usually, the Executive Summary is written at the end of the RAP, when all information is in place and must include the following:

- Brief project description and scope of work;
- Scale of impact on land, persons, structure, trees and other secondary assets
- RAP policies, cut-off date
- Stakeholder engagement, and consultation process/activities, disclosure
- Compensation measures, livelihood restoration, Resettlement sites
- Institutional arrangement and timeline for implementation
- Budget

8.3.1.3 Rationale

RAP rationale provides justification on the impact of the proposed project and its proposed mitigation especially when the project will trigger involuntary resettlement. It provides an overview of the project in terms of:

- Status of existing road – why is the infrastructure project necessary?
- How will the infrastructure benefit the barangay/municipality or city?
- How will infrastructure project improve the condition of the community?
- How will the infrastructure project (road, bridge, school, etc.) project affect people's livelihoods?



- Description on how the project is expected to meet the needs, reduce risks and provide mitigations to safeguard the affected people especially vulnerable groups

8.3.1.4 Objectives

The overriding goal of the RAP is to ensure that the social and economic bases of project-affected persons (PAPs) are at least restored, if not improved, after the project, and that PAPs will not be disadvantaged by the project. Overall, objectives should be SMART (Specific, Measurable, Attainable, Results-oriented and Time based)

Examples of a SMART objectives:

- To present viable options and strategies to ensure proper and humane resettlement of the PAPs in a timely manner.
- To identify all affected land, structures and improvements, and crops and trees
- To estimate Row costs as part of the FS/DED/validated RAP
- To serve as basis for inclusion of ROW costs in the project budget
- To provide compensation on lost assets based on replacement cost before construction.
- To ensure adequate involvement of the PAPs in RAP planning and that appropriate grievance mechanisms are accessible to them during the implementation of the RAP.
- To provide resettlement options for PAPs based on their choices, interest and capacity during consultation
- To restore lost livelihood by providing access to PAPs to various training and referral to job opportunities in the project prior to implementation
- To monitor compliance of the project during and after implementation.

8.3.1.5 Methodology

8.3.1.5.1 Locally-Funded Projects

Preparation of the Preliminary RAP

Procedure:

This task shall be guided by the Work flow specified in WF4 of the DRAM attached as Annex 8-3. The different activities in the preparation of the preliminary RAP are summarized in **Table 8-3** and are referenced by the description of activities in the subsequent Sections.

Table 8-3: Procedures for the Preliminary RAP

Procedures	SEMS reference and Resources Needed
1. Prepare a brief project description	Sec 8.3.1.6
2. If the project is a new roadway,	Sec 8.4.1



Procedures	SEMS reference and Resources Needed
3. If the Project involves the rehabilitation or improvement of an existing roadway, conduct site visit	Sec 8.3.1.7.
4. Initiate consultation with government Offices	Sec 8.4.1.1
5. Initiate Public consultation in barangay traversed by the project	Sec 8.4.1.2
6. Socioeconomic survey	Sec. 8.4.2
7. Input information using statistical package	Sec 8.4.2.7
8. Preliminary Data collection <ul style="list-style-type: none"> Meet with the CPDC/MPDC Meeting with the City/Municipal Assessor Go to the concerned DENR Regional Office, Land Management Section Conduct of ground survey	request the possibility of including the project in the Land Use Map, or better yet, in their Comprehensive Land Use Plan (CLUP), if it is due for revision. if maps are not available in the Municipal Assessor.
9. Land appraisal	Sec 8.4.8.1
10. Replacement Cost estimate	Sec 8.4.8.1-8.4.8.4
11. Compensation/Entitlements Package for PAPs	Sec 8.7.5
12 Prepare preliminary RAP Report	<ul style="list-style-type: none"> Appendix 11: RAP Data checklist Appendix 13: RAP Preliminary Cost Estimates for Land Appendix 14: Preliminary Cost Estimates for Structure/Improvements and Crops/Trees Appendix 15: RAP Report Outline (Preliminary)
Submit preliminary RAP Report	DE if the IO is a DEO b. RD if the IO is a RO c. Undersecretary concerned if the IO is a CO-UPMO Cluster/PPPS

Preparation of the Final RAP during DED

Procedure:

This Task shall be guided by the workflow specified in Annex WF5 of the DRAM attached as Annex 8-4. The final RAP makes reference to the preliminary RAP done during the feasibility study stage which contains the following steps and information as provided in **Table 8-4**.

Table 8-4: Procedures for the Final RAP during DED

Procedures	SEMS reference and Resources Needed
1. Prepare a brief project description	Sec 8.3.1.6
2. If the project is a new roadway,	Sec 8.4.1
3. If the Project involves the rehabilitation or improvement of an existing roadway, conduct site visit	Sec 8.3.1.7.
4. Initiate consultation with government Offices	Sec 8.4.1.1
5. Initiate Public consultation in barangay traversed by the project	<p><i>The following topics are considered mandatory during the PCMs:</i></p> <ul style="list-style-type: none"> a) Brief project description b) Reiteration of concept of RAP as a tool for socio-economic development. The RAP preparer must ensure that the RAP concept is clearly understood by the PAPs.



Procedures	SEMS reference and Resources Needed
	<ul style="list-style-type: none"> c) Tagging and taking of photographs of owner and structures. d) In the case of informal settlers, specify the Cut-Off date for eligibility, which is reckoned as the start of the census for PAPs and tagging for improvements. e) Importance of honesty and accuracy of responses in the census and socio-economic survey to be carried out. f) Open Forum to allow the PAPs to express their ideas, apprehensions, concerns and even objections regarding the proposed project.
6. Land Appraisal	<ul style="list-style-type: none"> a) Using the Parcellary Survey and Linear Staking of ROW, identify the limits of the affected land. b) Disclose affected lands. c) Determine the market value of the affected land using the appropriate option for property appraisal discussed in Section 2.8 of the DRAM. If the appraisal is to be carried out by the DED consultant as part of its scope of services, the appraisal must be done by licensed appraiser, using the applicable standards for assessment stated in Section 12 of the IRR of RA 19752. If done separately by a GFI or IPA, the Terms of Reference to be used by the GFI/IPA should include the same applicable standards for assessment. d) Using the data gathered above, prepare the Final ROW Cost Estimates for Land (Appendix 16).
7. Replacement Cost Computation	<ul style="list-style-type: none"> a) Through census and tagging, determine the number of structures affected by the project. Since this procedure will require an expert opinion, it must be carried out by a licensed IPA, or at least an Engineer with extensive experience in this field. This task must be strictly supervised by the IO. b) Through census and tagging and the socio-economic survey, determine the number of households affected by the project. This task must be carried out by a RAP/SIA Specialist. c) Prepare Structure Map. d) In the case of owners of structures/improvements who do not have legally recognized rights to the land, check if they meet all of the following criteria to be considered eligible for payment of Replacement Cost of their structures/improvements affected by the ROW in accordance with Section 6.8 of RA 10752-IRR: <ul style="list-style-type: none"> • Must be a Filipino citizen. • Must not own any real property or any other housing facility.



Procedures	SEMS reference and Resources Needed
	<ul style="list-style-type: none"> • Must not be professional squatter or member of a squatting syndicate as defined in RA 7279. • Must not occupy an existing government ROW. I <p>e) In addition, to be eligible for payment of Replacement Cost, check if the owner and occupant has proof of ownership of the structure/ improvement, e.g., Certification from Barangay.</p> <p>f) Compute the Replacement Cost of structures and improvements based on applicable Bill of Quantities (BOQ)/Bill of Materials (BOM) and in accordance with the guidelines in Section 2.10 of the DRAM. In general, the IO should do this using its in-house qualified DPWH ROW Acquisition Manual 2.5-4 Cost Estimator, considering that this is within the core area of competence of the DPWH.</p> <p>g) For major projects with a DED consultant, the consultant may be required to estimate the Replacement Cost as part of its scope of services; or if this is not part of the DED consultant's scope, a GFI/IPA may separately be engaged, especially where the IO inhouse staff is fully occupied with similar tasks.</p> <p>h) Using the data gathered above, prepare the Final ROW Cost Estimates for Structures and Improvements (Appendix 17). Relocation Cost Estimation for Informal Settlers</p> <p>i) Request the possibility of including the project in the Land Use Map, or better yet, in their Comprehensive Land Use Plan (CLUP), if it is due for revision if maps are not available in the Municipal Assessor.</p>
Relocation cost for Informal settlers	<p>SEMS 8.6.3.1</p> <p>a) For informal settler families classified as underprivileged and homeless (under RA 7279) and not qualified under the criteria in item F above but are qualified for relocation per RA 7279 in accordance with Section 14 of RA 10752-IRR, prepare the relocation site development plan.</p> <p>b) Compute the total relocation cost. This task must also be carried out by the IO or the DED consultant or a licensed IPA, based on BOQ/BOM.</p> <p>c) Ask the concerned LGU/NHA to provide, fund, and develop the resettlement site. If the LGU/NHA is unable to do so, the DPWH may fund and develop the site.</p> <p>d) Execute MOA with LGU regarding the formation of a Resettlement Implementation Committee (RIC).</p>



Procedures	SEMS reference and Resources Needed
Compensation/Entitlements Package for PAP	<ul style="list-style-type: none"> a) Determine the compensation/entitlements package to the PAPs in accordance with the Guidelines on RAP Preparation under DO 327, series of 2003 (Appendix 5), including the following: <ul style="list-style-type: none"> a. Replacement cost for structures and other improvements (if PAP is eligible in accordance with Section 5(b) of RA 10752) b) Payment for crop and trees c) Rehabilitation Assistance (if applicable) d) Financial Assistance (if applicable) e) Free Transportation f) Transitional Allowance (if applicable)
Final RAP Report	Prepare the Final RAP Report in accordance with the Report Outline provided in Appendix 15. Include a summary of the estimated Final ROW Acquisition Costs with a breakdown into basic components—viz, land, structures/improvements, crops and trees, relocation, other entitlements.
Submit Final RAP Report	<ul style="list-style-type: none"> a) Forward the Final RAP Report to the Planning Service/counterpart Planning and Design Unit in the RO/DEO, for review and endorsement prior to approval. Submit the Final RAP Report to the appropriate authority for approval, as follows: <ul style="list-style-type: none"> b) DE if the IO is a DEO b. RD if the IO is a RO c) Undersecretary concerned if the IO is a UPMO Cluster/PPP

Source: DRAM Section 2.5

Validation of Final RAP during DED

A validation shall be undertaken following the completion of the DED, to update the Final RAP particularly when there are changes in the design of the infrastructure project which will affect the defined ROW boundaries. This is needed if for instance when the RAP was finished several years ago but the project did not take off, such that physical and economic conditions may have substantially affected the appraisal values.

The IO shall follow the workflow for the validation of the Final RAP based on the DED as shown in **WF 6** of the DRAM attached in this Section as Annex 8-5.

Procedure: The following steps are summarized in Table 8-5 as indicated in the DRAM Section 2.5.

Table 8-5: Procedures for RAP Validation

Procedure	References/Materials/Outputs/Responsibility
Verify and firm up the ROW limits	Parcellary survey
Assess and verify the affected structures Examine scale of impact on structure	Photos of PAPs with his structure
Verify the type of land uses in the areas where the realignment sections are located.	Photos, Km reading



Procedure	References/Materials/Outputs/Responsibility
	Type of land: commercial, private or government
Verify the alignment or note any changes if any	Cadastral map, Land Valuation Map, and updated schedule of payment for improvements.
Verify cost of land through the BIR	Applicable zonal valuation in the area of interest
Verify the validity of land values, structure, trees, crops	Current market value of the land. Replacement cost of structures and improvements. Current market value of crops and trees.
Refer to result on assessment done by GFI or IPA	Refer: Annex 8, DRAM, Section 2.8
Disclose the validated appraised value of land	To be done by UPMO Cluster/PPPS/RO/DEO and the ESSD. Documents to suffice the value of land
Validate replacement cost of structure	To be done by PMO/RO/DEO and the ESSD.
Update ROW cost	Appendix 16 and 17 DRAM
Establish the validated price for negotiated land	Base on GFI/IPA results
Finalize the Entitlement matrix	Ref E&E Template
Validate and finalize the Livelihood Restoration and Improvement Program (LRIP) cost	LIRP program and cost
Finalize the Master list of PAPs with corresponding entitlements; Involve the LIAC to validate the list of PAPs	Profile of PAPs and entitlement UPMO Cluster/PPPS/RO/DEO and the ESSD, LIAC
Disclose the final Relocation Plan of the Final RAP	UPMO Cluster/PPPS/RO/DEO and the ESSD, LIAC
Finalize Total relocation cost	DED Consultant of GFI/IPA
Ensure that all corrections/updates have been reflected in the Letter-Offer, budget adjustment, and in pertinent portions of the Updated RAP.	RAP Specialist -DED Consultant
Attach the newly gathered data, i.e., GFI/IPA appraisal reports, BIR zonal valuation, cadastral maps, and Land Valuation Maps in the Updated RAP.	RAP Specialist -DED Consultant
Submit the Updated RAP to the appropriate authority for approval, as follows: 1. DE if the IO is a DEO 2. RD if the IO is a RO 3. Undersecretary concerned if the IO is a UPMO Cluster/PPPS	ESSD
Review the Updated RAP after which it shall update the MTPIP accordingly	PS



Procedure	References/Materials/Outputs/Responsibility
Prepare the necessary request for adjustment in the project budget to reflect the updated ROW costs.	PS

Source: DRAM Sec. 2.5

8.3.1.5.2 *Project with Foreign funding*

For international funded projects, the various methodologies and steps in the preparation of the RAP planning and its corresponding social impact assessment are specified in Section 7. RAP preparer needs to ensure that the methodology used represents a wide sector of groups especially PAPs and acceptable to both local and international requirements. Baseline information should have been obtained prior to writing of the RAP which are taken from the following methods, tools and outputs:

Table 8-6: Methods and Information in Preparing the RAP Report

Activity/Method	Reference/Tool	Document
Key Informant Interview	Section 7.6.2.3 Tool: Annex 7-6 KII guide	Documentation on KII
SES and Inventory of Assets	Section 7.6.2.4 Tool: Annex 7-1 SES survey form and inventory of assets	Baseline information of PAPs (100) Scale of impact on land, structures, and tree/crops
Census and Tagging	Section 7.6.2.4 Form 8.2 checklists on categorization of PAPs	Master list of PAPs/pictures
Consultation with stakeholder and PAPs (FGDs)	Section 7.6.2.5 Tool: Annex 7-4 FGD guides and procedures	FGDs documentation List of Attendees and pictures of the meeting

8.3.1.6 *Project Description*

The project description is usually found at the beginning of the project proposal and should also be part of the background information of the RAP Report. The main contents³⁰ shall consist of the following information:

- a. Type of proposed structure (road, bridge, dike, building, etc.)
- b. Scope of Work according to the following:
 - o *Construction* – Provision of a new infrastructure.
 - o *Rehabilitation* - Restoration of an existing damaged infrastructure to essentially the same condition as when it was first constructed
 - o *Improvement* – Upgrading/expansion of an existing infrastructure to a condition and capacity better than that of the present
- c. Project Technical Description - A short and concise description of the physical and

³⁰ As specified in the DRAM



technical nature of the project, including the physical measurements, e.g., km of roads; km of dikes, floor area of buildings, etc.

- d. Municipalities to be traversed/affected by the project
- e. Justification/benefits of the project
- f. Location map of project

8.3.1.7 *Right-of-Way Limits*

The DRAM has specified that if the project involves the rehabilitation or improvement of an existing road, conduct a preliminary site investigation and examine the following

- a. Width of existing road, compared to ROW limits
- b. Presence/absence of shoulders and side ditches (if necessary)
- c. Name of each barangay traversed by the roadway
- d. Type and number of encroachments, if any

Use the above information to determine the ROW limits.

8.4 **Field Work and Data Collection**

8.4.1 **Public Consultation Meetings**

The consultation process is basically a continuous activity which starts from the preparatory stage (pre-feasibility to feasibility stage up to the implementation stage and monitoring. In preparing the RAP, the consultation activity needs to specify the purpose/objectives of the consultation and highlight community roles in relation to the land acquisition and mitigation of resettlement impacts. Consultation activities (census survey, scoping, interviews, and focus group discussions)³¹ shall include the project affected persons (PAPs).

At Feasibility stage, the objectives of the consultation are generally to:

- share information about the proposed project
- enable the community to share their perceptions and opinions about the project
- collect information related to the socio-economic profile of the PAPs
- involve PAPs in RAP planning and recommend mitigation measures responsive to the PAPs needs
- disclosure of the RAP policies during coordination meeting with LGU, public consultation with PAFs and other stakeholders

At Detailed Engineering Design Stage, the objectives are focused on the following;

- review on the mitigation measures and resettlement options/packages with PAPs



- identify training activities suitable to the interest of the PAPs
 - visit to the resettlement sites
 - disclosure of the RAP
 - steps on Grievance Redress mechanism
 - payment schedule and requirements
1. When conducting a consultation meeting ensure that coordination with local government barangay heads have been coordinated, date, time, venue and participants.
 2. Prepare materials and relevant project information documents during consultation with LGUs such as laptop, projector, extension Wires, microphone or megaphone, tape recorder, Plans, project briefers, attendance sheet, camera, paper and ballpen/pencil, snacks, IEC materials /brochures)³²
 3. Pass around the attendance sheet for participants to sign
 4. Assign somebody to record Minutes of the meeting
 5. Record all issues raised and the responses of the RAP Facilitator to issues raised. (Use Form 8.1)
 6. Incorporate the issues and concerns and the proposed mitigation measures recommended by PAPs

³² Recommendation by Group 3 participants during the workshop Preparing the RAP Report and Monitoring Report



Table 8-7: Framework on Public Consultation Meetings in RAP Preparation

Date	Who will be consulted Participants	Purpose/Steps	Expected Outputs/Documents to be obtained	Sources of information
	(i) LGUs Provincial Engineer Provincial Planning and Development Officer/Coordinator (PPDO/PPDC), Provincial Assessor, Mayors, City/Municipal Engineers, City/Municipal and Development Coordinators (CPDCs/MPDCs & City/Municipal Assessors, as applicable	Present the project and seek comments and recommendations Include the possibility of the project to be included in the CLUP	Cadastral maps of the areas to be traversed affected by the project Latest Land Valuation Map Pricing of land based on tax declaration and or zonal value Socioeconomic profile of the area/ Copy of CLUP	Municipal /City Assessors DENR Regional Office, Land Management Section BIR District office I City/Municipal Planning
	(ii) Consultation with PAPs	Identification of impacts of land acquisition. Collecting data of PAPs Socio-economic profile of the affected persons. Affected land, and mitigation measures	Socioeconomic Profile of PAPs Impacts on land, structures, trees and crops	SEMS 7-1 SES and Inventory of land and Affected assets Recommended mitigation measures
	(iii) Other stakeholders ³³ National Commission on Indigenous Peoples (NCIP) DENR-EMB/DENR-PAMB/DNR-BMB Civil Society Organization ECAN board NHA PCA, DOT, DepEd, DTI, DHSUD, TESD, DSWD, MGB, PAWB, Electric Cooperative, Water companies, PCSD, PCUP, PLDT Barangay officials of Affected barangays	Involvement of PAPs Consultation regarding participation in joint collaborative work	Pre-condition certificate / Certificate of non-overlap Environmental permit and clearance Issues/concerns and roles relative to project implementation ECAN Zoning Certification Socialized housing Facilitate commitment for skills training Affected infrastructure, electric post Joint Memorandum Agreement Formation of Resettlement Implementation Committee	

Source: Workshop, Aug 26, 2021

³³ As recommended during the Workshop on preparing the RAP Report and Monitoring Report-August 16, 2021



8.4.1.1 Coordination Meeting with the LGU

At the initial stage of the FS, the DRAM has specified to:

1. Initiate consultation meetings with the concerned Governor, Provincial Engineer, Provincial Planning and Development Officer/Coordinator (PPDO/PPDC), Provincial Assessor, Mayors, City/Municipal Engineers,
2. City/Municipal Planning and Development Coordinators (CPDCs/MPDCs), and City/Municipal Assessors, as applicable. Present the Project Description. Seek comments and opinions, without allowing any party to manipulate conditions to favor their personal advantage. **(DRAM 2.4.3).**
3. Meet with the CPDC/MPDC and request the possibility of including the project in the Land Use Map, or better yet, in their Comprehensive Land Use Plan (CLUP), if it is due for revision. The following information shall be requested: (i) Socio-Economic Profile (ii) Copy of CLUP **(DRAM 2.4.9).**
4. For initial coordination meetings with the LGUs and PCMs, the ESSD of the Planning Service can assist the project proponent particularly in the RAP preparation and legal framework of involuntary resettlement.
5. Inquire about the availability of sites allotted for socialized housing. Request inclusion of PAPs in their shelter plan in case relocation becomes necessary.
6. Disclosure of RAP Policies.

8.4.1.2 Public Consultation with PAFs

1. Conduct barangay Public Consultation Meetings (PCMs). PCMs must be held in each barangay that will be traversed by the project. Venues for PCMs must be at neutral grounds, such as barangay halls, day care centers, public schools, and the like. This is to avoid certain individuals or groups from maneuvering conditions to work for their personal interests. The following topics are considered mandatory during the PCMs:
 - Brief project description.
 - Reiteration of concept of RAP as a tool for socio-economic development.
 - Disclosure of RAP Policies.
 - The RAP preparer must ensure that the RAP concept is clearly understood by the PAPs.
2. In the case of informal settlers, specify the Cut-Off date for eligibility, which is reckoned as the start of the census for PAPs and tagging for improvements
3. Open Forum to allow the PAPs to express their ideas, apprehensions, concerns and even objections regarding the proposed project



8.4.1.3 Consultation with Other Stakeholders

The importance of consultation with other stakeholders is significant especially in terms of sharing resources and develop partnership in other areas such as provision of skills training and capacity building. In terms of people who are the intended beneficiaries, the responsibility continues even when the project ceases, to support, and derive benefits from the project. These stakeholders³⁴ are reflected in Table 8-7. The disclosure of RAP policies shall be done also during consultation with other stakeholders.

8.4.2 Socio-Economic Surveys

The socioeconomic survey sets the base information and profile of the PAPs and sets also the benchmark for monitoring.

1. **Conduct census and socioeconomic survey of the PAPs.** A census covering general information on all the PAPs shall be undertaken. This includes demographic data and basic information on the owner and properties to be affected. For severely affected PAPs, obtain more detailed information, such as the amount and source of income and expenditures, availability of basic social services, etc., as part of the socio- economic profile to be established. For areas with legitimate indigenous people (IPs) carry out a separate socio-economic survey of affected IP community as part of the Indigenous People Action Plan (IPAP) particularly if the IPs are holders of certificates of Ancestral Domain Claim. Include geotagged photos showing the affected structure and adjoining areas, including existing landmarks and identifying features.
2. Use the information and survey forms for socioeconomic and inventory forms specified in SEMS Annex 7-2. and administer the survey covering all (100%) of PAPs.
3. Input properly accomplished survey instruments in the computer using an established statistical package. This will enable a systematic and fast processing of data gathered and thus help in establishing the socio-economic profile of the PAPs interviewed, and in computing the compensation package due them.
4. Analyze the data based on survey results
5. Prepare a Master list of PAPs
6. Categorize the PAPs based on information from the SES survey. (See **Annex 8.1 Form 2: Checklist on Categorization of PAPs**)

8.4.3 Cadastral Maps

The cadastral maps provide the technical descriptions of affected lots, the names of affected landowners, if any, within the RROW, must be taken from the corresponding Municipal, City or Provincial Assessor's Office.

1. Use the cadastral maps and right-of-way plans including title numbers of lots needed

³⁴ Identified by the Group members during the Workshop exercise.



for right-of-way as references, in obtaining the list of lot owners.

2. Cadastral maps are available at the Assessor's office, if not available at this Office, this can be obtained at the DENR-Land Management Bureau (LMB) or Land Management Section (LMS) of concerned DENR Regional Office to obtain the following:
 - a. Cadastral maps, together with the technical description of the lots needed for the ROW.
 - b. Certificate of Ancestral Domain Claim (CADC) areas, whether these are proclaimed or proposed.
3. If cadastral maps are not available at the LMB/LMS, go to the Land Registration Authority, borrow its Index Map, and request the needed cadastral maps.

During the DED Stage

The Parcellary Survey³⁵ should be done as part of the DED and its outputs shall serve as the technical basis for defining the lots to be acquired for the ROW of a project. Parcellary Survey may be undertaken directly by the concerned implementing office or by consultants if the implementing office has limited capability or available personnel to do the job. In either case, the preparation of parcellary plans is started once the ROW plans for the proposed project are completed as part of the DED.

8.4.4 Barangays Affected

The DRAM has specified the Conduct barangay Public Consultation Meetings (PCMs). PCMs must be held in each barangay that will be traversed by the project. Venues for PCMs must be at neutral grounds, such as barangay halls, day care centers, public schools, and the like. This is to avoid certain individuals or groups from maneuvering conditions to work for their personal interests. The following topics are considered mandatory during the PCMs:

- Brief project description
 - Reiteration of concept of RAP as a tool for socio-economic development.
 - The RAP preparer must ensure that the RAP concept is clearly understood by the PAPs.
1. Identify the names of affected barangays to be traversed by the proposed project
 2. Get information on population data of the barangay from the Barangay Office
 3. Characterize the affected barangays in terms of socioeconomic information by observing the type of housing condition.
 4. Fill out information in **Form 8.3 Profile of Barangays Affected** to classify the affected barangays

8.4.5 Land Use and Areas Affected

1. Describe the land use of affected areas occupied by PAPs to be used for the project

³⁵ As discussed by the Resource Person during the Workshop – taken from the DRAM



2. Use information from the socioeconomic survey of affected land as described by PAPs
3. Summarize your findings in **Form 8.4 Categories of affected land.**

8.4.5.1 *Categories of Landowners and Land Users*

1. Landowners and mixed use, agricultural, commercial, industrial and institutional)
 - Those who have full title (such as Original Certificate of Title (OCT) or Transfer Certificate of Title (TCT)).
 - Those who are not original patent holders of lands granted under Commonwealth Act (CA) 141 and whose ownership of the land is not acquired through a gratuitous title (e.g., donation, succession).
 - Those who are original patent holders of lands granted through CA 141 and the land has not been subjected to previous government exercise of its lien.
 - Those who were former ISFs but now hold a title of land through government socialized housing programs.
 - Those who can present the following:
 - i. Tax Declaration showing his and his predecessors' open and continuous possession of the property for at least 30 years.
 - ii. A certification from the DENR that the land is alienable and disposable, or other documents that may show proof of ownership.
 - Those who are holders of Emancipation patent (EP), or Certificate of Land Ownership Award (CLOA) granted under the respective comprehensive agrarian reform statutes.
 - Those who were former ISFs but now hold title/s of land through government socialized housing programs.
2. Government agencies and local government units who are owners of affected public land.

8.4.6 **Structures and Improvement Affected**

With the use of the SES survey form and Inventory of Affected Assets (SEMS Annex 7-2):

1. Undertake the survey of affected structures and improvements covering 100% of PAPs.
2. Identify the type of structure owned by PAPs and classify according to type and severity of impact.
3. Categorize the type of affected structure (primary or secondary structure, business)
4. Fill out information in Form 8.5 Inventory of Affected structures.

Section 5(a)(2) states that the Implementing Agency (IA) may offer to acquire, through negotiated sale, the compensation price equivalent to the replacement cost of structures and improvements.

1. Under Section 6.6 of IRR of R.A. 10752, the replacement cost of structure or improvements affected by the ROW shall be based on the current market prices of materials, equipment, labor, contractors



profit and overhead, and all other costs associated with the acquisition and installation of a similar asset in place of the affected asset. In addition,

- i. If the affected structure has been damaged, then the replacement cost should be the pre-damaged condition of that structure.
 - ii. The replacement cost of the structure may vary from the market value of the existing structure, since the structure that would actually replace it may have a different cost at current market prices; and,
 - iii. The replacement structure has to perform the same functions and meet the performance specifications as the original structure.
2. The DRAM has specified that for structure owners/or with improvement who do not have legally recognized rights to the land:

Check they if they meet all of the following criteria to be considered eligible for payment of Replacement Cost of their structures/improvements affected by the ROW in accordance with Section 6.8 of RA 10752-IRR:

- a) Must be a Filipino citizen.
 - b) Must not own any real property or any other housing facility.
 - c) Must not be professional squatter or member of a squatting syndicate as defined in RA 7279.
 - d) Must not occupy an existing government ROW.
 - The owner and occupant must also show a proof of ownership of the structure/improvement, e.g., Certification from Barangay.
 - Informal settler families classified as underprivileged and homeless (under RA 7279) and not qualified under the criteria above shall be entitled to relocation per RA 7279 in accordance with Section 14 of RA 10752-IRR.
3. Prepare cost estimates of all structures and improvements per square meter based on Replacement Cost, as defined in the IRR of RA 10752. This task should generally be carried out directly by the IO, using an in-house Cost Estimator, considering that this is within the core area of competence of the DPWH. Where necessary for major projects, this task may be carried out by the FS consultant, if any, as part of its scope of services, or separately by a qualified GFI/licensed IPA using an engineer with extensive experience in this field, under the strict supervision of the IO.
4. As provided in Section 15 of RA 10752-IRR, for projects that are at the PFS or FS stage only, the proposed budget for the Replacement Cost of affected structures or improvements may be based on benchmark or rule-of-thumb unit costs which are derived from industry standards and accepted by the DPWH. An example of a benchmark unit cost is cost per square meter of floor area of a house or building.
5. Using the data gathered above, prepare the Preliminary ROW Cost Estimates for Structures and



Improvements using **Appendix 14 of the DRAM**.

8.4.7 Trees and Crops Affected

With the use of the SES survey form and Inventory of Affected Assets (SEMS Annex 7-2).

1. Undertake the survey of affected Trees and crops
2. List all affected trees corresponding to the name of the owners in the Master list
3. Identify all affected crops and trees using Form 8.6: Affected crops and Trees

8.4.7.1 Determining Replacement Cost of Crops and Trees

Valuation of crops and trees vary by regions. The common practice is based on the costing of the Provincial Agricultural Office³⁶ or to any local Municipal Office. Usually with the updating of the CLUP, the valuation of land, crops and tree is also updated.³⁷

In other regions, example of valuation on heirloom³⁸ crops applied the highest value of rice, from P50 per kilo up to P70.00. The experience on CLEX³⁹ is to allow farmers to harvest their crops as it is more profitable than when paying them using the replacement cost computation. This demonstrates good practice in valuation, to ensure that affected persons are not disadvantaged by the project.

As provided in RA 10752, for negotiated sale, the appraisal shall aim to determine the current t market value of crops and trees affected by the proposed ROW. The IO may engage the services of a GFI/IPA to undertake the appraisal of affected crops and trees. The IO may also directly do the appraisal of the crops and trees if it has the in-house capability to do so, using latest applicable established market values of the following entities:

- Department of Agriculture (DA) for crops
- Philippine Coconut Authority (PCA) for coconut trees
- Department of Environment and Natural Resources (DENR) for perennials and timber trees
- Department of Finance (DOF)
- Local Government Units (LGUs), Assessor's Offices, for individual trees

8.4.8 Land Valuation Map

The land valuation map can be obtained from City/Municipal Assessor's office which provide an updated schedule of payment on land improvements. As specified in the DRAM for land under negotiated sale, the project may use the appraisal reports of the (a) government financial institution (GFI) with adequate experience in property appraisal to be selected by the IA through a competitive process; or an

³⁶ As in the case of provincial or Regional projects- as shared by the Regional Coordinators during the workshop

³⁷ As shared by the Regional Coordinators during the workshop

³⁸ Cordillera Region- as shared by the Regional Coordinators during the Workshop

³⁹ Used as reference during the Workshop



independent property appraiser (IPA) accredited by: (1) the Bangko Sentral ng Pilipinas (BSP) or (2) a professional association of appraisers recognized by BSP (Section 6.2 IRR, R.A. 10752).

8.4.8.1 Standards for Land Appraisal/Assessment for Negotiated Sale

Section 7 of RA 10752 (Section 12 of the IRR) sets the standard for determining the value of property/land which shall be observed.

1. The classification and use for which the property is suited based on, among other things, the latest approved land use plan and/or zoning ordinance, if any, of the city or municipality concerned.
2. The development cost for improving the land based on, among other things, the records and estimates of the City or Municipal Assessor concerned, GFI or IPA for similar or comparable lands.
3. The value declared by the owners based on the value shown in the owners' latest Tax Declaration Certificates or Sworn Statements.
4. The current selling price of similar lands in the vicinity based on, among other things, the latest records on Deeds of Sale for similar lands in the office of the Register of Deeds concerned.
5. The reasonable disturbance compensation for the removal and/or demolition of certain improvements on the land and for the value of improvements thereon considering, among other things, the replacement cost of improvements at current market prices as provided in Section 6.6 of this IRR.
6. The size, shape or location, tax declaration and zonal valuation of the land based on, among other things, the latest records on Deeds of Sale in the Register of Deeds, tax declaration by the City or Municipal Assessor, zonal valuation of the BIR for comparable properties.
7. The price of the land as manifested in the ocular findings, oral as well as documentary evidence presented; and,
8. Such facts and events so as to enable the affected property owners to have sufficient funds to acquire similarly situated lands of approximate areas as those required from them by the government, and thereby rehabilitate themselves as early as possible
9. In all cases, the increase in the value of the affected property brought about by the infrastructure project itself shall not be considered in the determination of the purchase price.

8.4.8.2 Pricing of Land Based on BIR Zonal value

As stipulated in the DRAM, for budgeting purposes, the ROW costs of projects without any benchmark prices may be based on the BIR zonal values times a factor not exceeding two (2).

For projects that have undergone pre-feasibility or feasibility study only, the proposed budget or appropriations for the replacement cost of affected structures or improvements may be based on



benchmark unit costs which are derived from industry standards and accepted by the DPWH. An example of a benchmark unit cost is cost per square meter of floor area of a house or building.

For projects that have undergone detailed engineering design, the proposed budget or appropriations for the replacement cost of affected structures or improvements shall be based on detailed estimates, including bill of materials/quantities, in accordance with the standards and procedures set by the DPWH.

The basis for valuation on land and other assets are reflected in Table 8-8.

Table 8-8: Valuation of Assets

Item	Basis for pricing
For Land	<p>FS stage: <i>Road widening</i> -BIR zonal values times a factor not exceeding two or use of GFI/IPA</p> <p><i>Major new construction</i> -land shall be valued using GFI/IPA for the current market value of land</p> <p>DED and validated stages Road widening and major new construction – Land shall be valued using GFI/IPA for the current market value of land.</p>
For structures and improvements	<p>Relevant benchmark costs for replacement derived from industry standards and accepted by the DPWH, e.g., cost per square meter of house.</p> <p>Compensation for affected structures shall be at replacement cost computed at the cost of material and labor to reconstruct a similar structure for houses and other fixed structures with no deduction for salvaged materials (based on LAPRAP).</p>
For Crops and Trees	<p>Relevant market prices from concerned agencies, like the Department of Agriculture (DA)/Philippine Coconut Authority (PCA)/Department of Environment and Natural Resources (DENR)/ Department of Finance (DOF)/Local Government Unit (LGU).</p>

Source: DRAM

When there is a difference in the market value determined by the BIR, on one hand, and the market value determined by the GFI/IPA, on the other, the IO shall adopt **whichever is higher** of the two estimated *market* values – i.e., (a) the market value as determined by GFI/IPA, and (b) the market value as reflected in the BIR Zonal Value – as the appropriate price offer to the land owner under the mode of negotiated sale,

8.4.8.3 Pricing of land based on Tax Declaration

Section 7 of RA 10752 (Section 12 of the IRR) sets the standard for determining the value of property/land which shall be observed.

1. The classification and use for which the property is suited based on, among other things, the latest approved land use plan and/or zoning ordinance, if any, of the city or municipality concerned.
2. The development cost for improving the land based on, among other things, the records



- and estimates of the City or Municipal Assessor concerned, GFI or IPA for similar or comparable lands.
3. The value declared by the owners based on the value shown in the owners' latest Tax Declaration Certificates or Sworn Statements;
 4. The current selling price of similar lands in the vicinity based on, among other things, the latest records on Deeds of Sale for similar lands in the office of the Register of Deeds concerned;
 5. Negotiated sale for the acquisition of the property shall be pursued based on the provisions of R.A. 10752 and its IRR as prescribed in the DRAM. Hence, the first and final price offer shall be the sum of:
 - a. the current market value of the land,
 - b. the replacement cost for structures and improvements, and
 - c. the current market value of the crops and trees.
 6. To determine the appropriate price offer for negotiated sale, the implementing office may engage a GFI or IPA as provided in the DRAM.
 7. When there is a difference in the market value determined by the BIR, on one hand, and the market value determined by the GFI/IPA, on the other, the IO shall adopt **whichever is higher** of the two estimated market values – i.e. (a) the market value as determined by GFI/IPA, and (b) the market value as reflected in the BIR Zonal Value

8.4.8.4 Recent Prices of Comparable Price in the Areas

1. In accordance with the DRAM, the increase in the value of the affected property brought about by the infrastructure project itself shall not be considered in the determination of the purchase price.
2. The development cost for improving the land based on, among other things, the records and estimates of the City or Municipal Assessor concerned, GFI or IPA for similar or comparable lands. This shall be based on, among other things, the records and estimates of the City or Municipal Assessor concerned, GFI or IPA for similar or comparable lands.
3. The value declared by the owners. This shall be based on the value shown in the owners' latest Tax Declaration Certificates or Sworn Statements.
4. The current selling price of similar lands in the vicinity based on, among other things, the latest records on Deeds of Sale for similar lands in the office of the Register of Deeds concerned.



8.4.8.5 OCTs/TCTs and Tax Declaration with Lot descriptions

If the property owner accepts the price offer of the IO to acquire his property through negotiated sale, (See **Section 2.18** of the DRAM), the following must be secured from the owner needed for the DAS:

- a. Owner's duplicate of the Original/Transfer Certificate of Title (IO must validate this with the Register of Deeds copy of the OCT/TCT in the IO's possession)
- b. Tax Declaration of parcel
- c. Tax Declaration of improvements (except for informal settler (IS)-owners)
- d. Subdivision Plan of the parcel
- e. Tax Clearance or, if the landowner requests the IO to advance the payment of Real Property Taxes to be deducted from the payment, a Statement of Tax Account from the Treasurer of the LGU concerned
- f. Copies of two (2) valid identification cards
- g. Owner's Taxpayer Identification Number (TIN)
- h. If applicable, where the improvement owner is different from lot owner and is authorized to build on the land, a certification from the lot owner that the improvement built therein is owned by the improvement owner
- i. If applicable, where the improvement owner is an informal settler, any document showing that he is a Filipino citizen; a certification from the Land Registration Authority that there is no property registered under his name, whether in an urban or rural area; a certification from the Local Inter-Agency Committee (LIAC) that he is not a professional squatter or a member of a squatting syndicate, as defined in Republic Act No. 7279, otherwise known as the "Urban Development and Housing Act of 1992" and does not occupy an existing government ROW.
- j. If applicable, Special Power of Attorney
- k. Other documents that may be found necessary by the IO to ensure transfer of the property to the Republic

8.5 Possible Relocation Sites

Relocation sites are generally the responsibility of the LGU. Before implementing the project, there is a need to examine and assess the various options on resettlement sites as some LGUs have more than one sites.

1. Coordinate with the LGU regarding potential resettlement sites; whether it is land only or provided with socialized housing.
2. PAPs shall be provided with options according to their choice and capacity, and willingness to pay for the housing.
3. Coordinate with NHA for socialized housing project which could be offered to PAPs, ask how much would the cost of amortization monthly and disclose this information to PAPs.
4. Arrange for PAPs to visit the resettlement site for them to assess and decide for



themselves

5. Have checklist on the following information of the resettlement sites: Use form 8.7

Assessment of potential resettlement sites

- a. Distance of Resettlement site to basic services (school, church, market, health center, workplace)
- b. Availability of transportation, all weather roads,
- c. Availability of clean water for drinking
- d. Availability of electricity
- e. Job opportunities
- f. Acceptability of the host community for new settlers
- g. Absorptive capacity of the resettlement site to accommodate all Pas
- h. Absorptive capacity of the resettlement site to accommodate school children
- i. Discuss the potential of income generation opportunities in the new resettlement site with NGOs who will have the potential to assist in the rehabilitation lost livelihood brought about by involuntary displacement
- j. Discuss with the LGU the findings and recommendation on resettlement sites.

8.6 Impacts and Mitigation Measures

8.6.1 Expected Impact

Expected impacts of projects with involuntary resettlement are wide ranging but oftentimes they can be fully mitigated. Some of these common impacts are identified in **Table 8-5**.

1. Identify the impacts based on results of consultation and survey results (SEMS Annex 7-2)
2. Quantify the number of PAPs based on potential losses
3. Assess the impact whether the impact is severe or less severe
4. Fill out information in Form 8 Checklist on Impacts

8.6.2 Avoidance/Preventive Measures

As much as possible, involuntary resettlement must be avoided and should be part of the project policy that must be observed. However, if it is inevitable, efforts to minimize the impact must be done.

- a. Provide various options on the alignment and select the best option with less people to be displaced.
- b. The design must be shown comparing with other options to justify the selected alignment
- c. For PAPs whose residential land is still viable for putting up a structure, a “push back” must be encouraged instead of resettlement
- d. Discuss preventive measures with the IO, and involve PAPs in defining mitigation measures that would ease the burden of PAPs



8.6.3 Mitigating Measures

Measures to mitigate the impact are provided based on LAPRAP⁴⁰ as shown in Table 8-9:.

Table 8-9: Scale of Impact and Mitigation Measures

Category/Description of Impact	Mitigation
1. Severely affected - PAPs who will lose 20% of their assets and the remaining is no longer viable for continued use or occupancy	Full payment for fair market value of the entire land and full payment for the entire structure and other improvement affected
2. Marginally affected PAPs who will lose less than 20% of their assets and the remaining structure is still viable for use or occupancy	Full payment of the for the fair market value of land to be taken and full replacement cost of the portions of the structures and other improvement affected
3. PAPs occupying but not owning affected land and structures.	Compensation for affected structures but not for land

1. Compensation for land shall be based on zonal value. When there is a difference in the market value determined by the BIR, on one hand, and the market value determined by the GFI/IPA, on the other, the IO shall adopt whichever is higher of the two estimated market values – i.e. (a) the market value as determined by GFI/IPA, and (b) the market value as reflected in the BIR Zonal Value (based on DRAM).
2. Compensation for affected structures shall be at replacement cost computed at the cost of material
3. and labor to reconstruct a similar structure for houses and other fixed structures with no deduction for salvaged materials.
4. Compensation for improvement of affected crops and or trees shall be computed at the value determined by the Municipal/City Assessor for crops and trees and DENR for timber species.

8.6.3.1 Informal Settlers

Informal Settlers are individuals or groups/households who have no recognizable title or other acceptable proof of ownership of public or private lands that they are occupying. Occupation of lots may either be with or without permission of the lot owner.

- To be able to avail of relocation entitlement eligible ISFs must be the actual occupants of structures and in the master list of PAPs who were present in the area as of the cut-off date (i.e., first day of conduct of census tagging).
- ISFs who are homeless and underprivileged as defined in Urban Development and Housing Act of 1992 (R.A. 7279) are eligible to become beneficiaries of government socialized housing programs if they satisfy the rest of the criteria set in the same Act (Please refer to

⁴⁰ As discussed by the Legal Resource person during the Workshop on August 17, 2021



Section 4.2.3). Renters and sharers within the informal settlement structures are also eligible to avail of said housing programs if they satisfy such criteria.

- DSWD is tasked to validate ISF and provide financial assistance such as 4Ps in coordination with other agencies such as the DILG, TESDA or any partner agencies based on MOA or Joint Memorandum Circular.

8.7 Cost Estimates, Compensation and Entitlement

As provided in **Section 2.8**, the IO may engage a GFI/IPA to do the appraisal of the land under any of the stages – viz., during FS (Preliminary Appraisal), during DED (Final Appraisal), or during RAP Validation (Appraisal Verification/Updating). In accordance with Section 6.3 of RA 10752-IRR, the Terms of Reference (TOR), which shall be used by the GFIs and IPAs in setting the market value of the land, should include the applicable standards stated in Section 2.9.1 above.

8.7.1 Determination of the Market Value to be Offered to the Owner

For negotiated sale, Section 5(a) of RA 10752 states that:

The implementing agency shall offer to the property owner concerned, as compensation price, the sum of:

- (1) The current market value of the land,*
- (2) The replacement cost of structures and improvements therein; and*
- (3) The current market value of crops and trees therein.*

To determine the appropriate price offer, the implementing agency may engage the services of a government financial institution with adequate experience in property appraisal, or an independent property appraiser accredited by the Bangko Sentral ng Pilipinas (BSP) or a professional association of appraisers recognized by the BSP to be procured by the implementing under the provisions of Republic Act No. 9184, otherwise known as the “Government Procurement Reform Act” and its implementing rules and regulations pertaining to consulting services.

8.7.2 Preliminary Cost Estimates for Land

1. Using the data gathered in Section 8.4 and Form 4, appraise the affected land using market-based valuation using the appropriate option for property appraisal discussed in **Section 2.8** of the DRAM.
2. Prepare the Preliminary ROW Cost Estimates for Land using **Appendix 13 of the DRAM** attached as Annex 8-7: RAP Preliminary Cost Estimate for Land

8.7.3 Preliminary ROW Replacement Cost Estimates for Structures

Using the data gathered in Section 8.4 prepare the **Preliminary ROW Cost Estimates for Structures and Improvements using Appendix 14 of the DRAM**, attached as Annex 8-6 RAP Preliminary Cost Estimates for Structures/Improvement and Crops/Trees)



8.7.4 Preliminary Cost Estimates for Crops and Trees

Using the data gathered in Section 8.4 and Form 7, prepare the **Preliminary Cost of Structure and Trees/Crops**.

8.7.5 Preliminary Estimates of Other Entitlements of PAPs

The LAPRAP has also defined other entitlements as reflected in the entitlement matrix. Based on the information provided in Table 8-10, compute the preliminary cost for each PAP according to eligibility on entitlement.

Table 8-10: Basis for Computation on Other Entitlements

Entitlement	Category and Impact	Computation
Inconvenience allowance	Severely affected PAPs who owns land within the affected land and needs to move elsewhere	P10,000
Rehabilitation Assistance	Severely affected PAPs whose source of income is severely affected and need to engage in income earning activities. Applicable also vulnerable groups like IP, women elderly	Priority assistance for skills raining (p15,000 budget) DPWH is responsible to coordinate with concerned government agencies for assistance such as skills training
Financial Assistance	Severely affected PAPs (agricultural tenant who acquired land under CA 141	Equivalent to annual average gross harvest for the last 3years but not less the P15,000 (EO 1035, in addition to compensation of crops
Free transportation	Severely affected relocating PAPs including shanty dwellers who opt to back to their place of origin or to government relocation site	Provision of free transportation
Transitional allowance	Severely affected PAPs -house tenants of affected main structures who will have to find a new place	Equivalent to one month rent of a similar structure within the same area
	Shop owners to cover for their computed income loss	Computed income loss during demolition and reconstruction of their shop but not to exceed 1 month period
Disturbance compensation	Severely affected lessees of agricultural land affected by the project	Equivalent to 5 times the average gross harvest during the last 5 years

8.7.6 Preliminary ROW Cost Estimates for Resettlement site Development

1. Preliminary Cost estimate of resettlement site should be obtained from the City or Municipal Planning Office Lot development cost, if the site is not yet developed.
2. Obtain information on socialized housing program from the National Housing Authority
3. Incorporate in the preliminary RAP report on socialized housing whether LGU assisted or NHA housing, as counterpart share in the project



NHA Memorandum Circular No. 2427 s. 2012 as enabler and facilitator in the housing delivery process under R.A. 7279, NHA issued the Revised Guidelines for the implementation of the Resettlement Assistance Program for Local Government Units designed to enhance the capabilities of LGUs to provide housing for informal settlers requiring relocation and resettlement. Target beneficiaries include families displaced or to be displaced from sites earmarked for government infrastructure projects. As partners of the program, NHA will (i) provide technical assistance to LGUs in preparing project plans and formulating policies and guidelines in implementing resettlement projects and (ii) contribute funds (in the form of grants) for the development of resettlement sites. The LGUs on the other hand shall (i) contribute land for the project and (ii) be the lead project implementer with overall responsibility for the operation and management of the resettlement project to include preparation of overall project plans, site development and housing plans, beneficiary selection, relocation of families and estate management.

NHA Memorandum Circular No. 015, Series of 2015

This Memorandum Circular provides the guidelines for site selection, site suitability, and site planning in the implementation of various housing development programs and projects of the National Housing Authority. It also entails the selection and planning of sites for housing with the objective of rationalizing the land use of NHA housing projects considering the many environmental and social issues on housing development vis-à-vis the existing government rules and regulations.

NHA Memorandum Circular No. 014, Series of 2018

NHA Memorandum Circular No. 014, S.2018 entitled, “Revised Guidelines for the Financing of the Acquisition of Developed Lots and Completed Housing Units in Permanent Housing Sites Through the Community Based Initiative Approach (CBIA)” seek to provide improvements on the Community Initiative Approach (CIAP) per NHA Board Resolution Nos. 6081 and 6155 dated May 13, 2016, and March 01, 2017, respectively. The latest issuance includes enhanced participation of Community Associations (CA) in identified aspects of the relocation and resettlement program and project implementation process, as well as strengthening of controls in the site evaluation, evaluation of landowners/developers/contractors, review and approval of project proposals, and project implementation.

8.8 Summary of ROW Acquisition Procedures

The overall summary of ROW acquisition process showing the stages of RAP preparation is indicated in Table 8-11 according to type of project.

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Table 8-11: ROW Acquisition Procedures for Simple Projects (Road Widening) vs. Major Projects (New Construction) based on DRAM



Activity	Simple Road Widening	Major New Construction
Pre-Feasibility/Feasibility Study (FS)	DPWH should do at least Pre-FS	DPWH should do FS, usually using consultant
Environmental Compliance Certificate (ECC)/ Certificate of Non-Coverage (CNC) Application	DPWH shall secure CNC from DENR	DPWH, with aid of consultant if needed, shall conduct Environmental Impact Assessment (EIA), prepare Environmental Impact Statement (EIS), and secure ECC/CNC from DENR
1. Preliminary RAP	<i>Preliminary RAP is for ROW budgeting purposes, including cost of Parcellary Survey and Final RAP.</i>	<i>Preliminary RAP is for ROW budgeting purposes, including cost of Parcellary Survey and Final RAP.</i>
Land Market Appraisal and Value	DPWH may estimate this, using BIR ZV x factor not exceeding 2; or use GFI/IPA under small value procurement	DPWH may use GFI/IPA to do land appraisal and determine market value
Structures/Improvements Replacement Cost	DPWH should estimate this, using benchmark/rule-of-thumb data, e.g., cost/square m – and approximate area and type of structure (e.g., wooden, concrete, or mixed)	DPWH should estimate this, using benchmark/rule-of-thumb data, e.g., cost/square m – and approximate area and type of structure (e.g., wooden, concrete, or mixed)
Crops/Trees Market Value	DPWH may estimate this, using DA/PCA/DENR/DOF/LGU data	DPWH may estimate this, using DA/PCA/DENR/DOF/LGU data
Relocation Cost of Informal Settlers, if applicable	Resettlement site is applicable only for IS qualified as underprivileged. Ask LGU/NHA to provide, fund, and develop resettlement site. If LGU/NHA is unable to do so, DPWH may fund and develop the site. DPWH should estimate cost of resettlement site, using benchmark data, e.g., cost/square m of serviced site (land, road, drainage, etc.)	Resettlement site is applicable only for IS qualified as underprivileged. Ask LGU/NHA to provide, fund, and develop resettlement site. If LGU/NHA is unable to do so, DPWH may fund and develop the site. DPWH should estimate cost of resettlement site, using benchmark data, e.g., cost/square m of serviced site (land, road, drainage, etc.)
Detailed Engineering Design (DED)	DPWH may do DED in-house, or outsource parts of DED	DPWH may outsource DED or parts thereof to DED consultant
Parcellary Survey	DPWH may outsource this to licensed GE based on template TOR	DED consultant may do this, using licensed GE, following template TOR.
2. Final RAP	To be done at least one year ahead of implementation.	
Land Market Appraisal and Value	DPWH may use GFI/IPA under small value procurement	DED consultant or GFI/IPA may do this, using licensed Appraiser
Structures/Improvements Replacement Cost	DPWH may determine this, using Bill of Quantities (BOQ)/ Bill of Materials (BOM)	DPWH or DED consultant may determine this, using experienced estimator
Crops/Trees Market Value	DPWH may determine this, using DA/PCA/DENR/DOF/LGU data	DED consultant may determine this, using DA/PCA/DENR/DOF/LGU data



Activity	Simple Road Widening	Major New Construction
Relocation Cost of Informal Settlers, if applicable	Ask LGU/NHA to provide, fund, and develop resettlement site. If LGU/NHA is unable to do so, DPWH may fund and develop the site. DPWH should estimate cost of resettlement project, based on BOQ/BOM.	Ask LGU/NHA to provide, fund, and develop resettlement site. If LGU/NHA is unable to do so, DPWH may fund and develop the site. DPWH or DED consultant should estimate cost of resettlement project, based on BOQ/BOM.
Formation of Resettlement Implementation Committee (RIC)	Applicable if there are IS. Execute MOA with LGU.	Applicable if there are IS. Execute MOA with LGU.
3. RAP Validation	<i>DPWH may do the validation after DED approval, but before Notice of Award to civil works contractor.</i>	<i>DPWH may do the validation, or use GFI/IPA to do it</i>
Land Market Appraisal and Value	DPWH should validate this, using competent in-house staff, or outsource this to GFI/IPA	DPWH may use GFI/IPA to validate this, except where DED RAP is done by GFI/IPA, in which case DPWH will validate
Structures/Improvements Replacement Cost	DPWH should update and confirm this, using in-house staff.	DPWH may update and validate this
Confirmation of Relocation Cost of Informal Settlers, if applicable	DPWH should update and confirm this, in coordination with LGU/NHA	DPWH may update and validate this, or use GFI/IPA to do this task, in coordination with LGU/NHA

Source: DRAM

8.9 Grievance Mechanism

While an infrastructure project such as road/bridges carry many positive results, it is also inevitable that there will be people that will be aggrieved due to possible adverse impact or inconvenience the project's implementation will have on them. Some of these grievances often surface during the implementation phase. Some of these minor project impacts can quickly become a major grievance if left unmanaged. By having a GRM that provides predictable, transparent, and systematic process to PAPs, the project can respond early on complaints before it aggravates, helps resolve conflict, resulting to fair and acceptable outcomes.

- Grievance related to decrease or loss of income and livelihood of operators and drivers.
- Loss of dwelling units, secondary structures, and other immovable assets.
- Change in economic and social conditions of project affected persons (PAPs) or stakeholders
- Security issues
- Accidents
- Loss of access to basic services, (e.g., bridge, parking's, library, etc.)
- Other operational issues causing inconvenience to the community and other stakeholders



- Grievances regarding environmental and social impacts due to construction work (dust, sanitation, and noise, etc.)
- Delay in the salaries of labors
- Grievance of women in the construction area
- Any other issue pertinent to the engineering work (quality of work or delay in the construction work)

8.9.1 Procedures for Grievance

Grievances related to any aspect of the project or sub-project will be handled through negotiations and are aimed at achieving consensus following the procedures outlined below:

1. Ensure that the GRM Committee or Barangay Grievance Committee are in place. Involve women in the GRM committee
2. Check whether the procedures are followed in filing grievance as specified below
 - a. The grievance shall be filed by the PAP with the Resettlement Implementation Committee (RIC) who will act within 15 days upon receipt thereof, except complaints and grievances that specifically pertain to the valuation of affected assets, since such will be decided upon by the proper courts.
 - b. If no understanding or amicable solution can be reached, or if the PAP does not receive a response from the RIC within 15 days of registry of the complaint, he/she can appeal to the concerned Regional Office, which should act on the complaint/grievance within 15 days from the day of its filing.
 - c. If the PAP is not satisfied with the decision of the Regional Office, he/she, as a last resort, can submit the complaint to any court of law.
 - d. PAPs shall be exempted from all administrative and legal fees incurred pursuant to the grievance redress procedures.
 - e. All complaints received in writing (or written when received verbally) from the PAPs will be documented and shall be acted upon immediately according to the procedures detailed above.
3. Record all project related grievances as well as resolutions as provided.

8.10 RAP Implementation Committee

Based on LARRIP Policy, the composition of the RIC include:

- Representatives from the Regional Office
- Representatives from the barangays affected
- Representative from the DEO
- Representative from the City/Municipality, the NCIP provincial and/or regional office, with separate representation for IP/ICC Representative of PAPs (both



men and women)

8.10.1 Functions and Responsibilities

1. Assist the DPWH staff engaged in LARRIPP activities in (a) validating the list of AFs; (b) validating the assets of the PAFs that will be affected by the project (using a prepared compensation form); and (c) monitoring and implementing the LARRIPP.
2. Assist the DPWH and NCIP staff in identifying who among the Project Affected Persons are IPs or belong to ICCs.
3. Assist the DPWH staff engaged in the LARRIPP activities in the public information campaign,
4. public participation and consultation.
5. Assist DPWH in the payment of compensation to PAFs.
6. Receive complaints and grievances from PAFs and other stakeholders and act accordingly.
7. Maintain a record of all public meetings, complaints, and actions taken to address complaints and grievances; and
8. In coordination with concerned government authorities, assist in the enforcement of laws/ordinances regarding encroachment into the project site or Right-of –Way (ROW).

8.11 Livelihood and Income Restoration Program

The DRAM has specified payment of compensation for loss of income and livelihood. Compensation for income losses is not provided for in any national legislation except for agricultural tenants, lessees, and free patent holders. However, for projects with international assistance such as JICA or ADB, they prescribe payment for loss of income, a combination of assistance in various forms are carefully crafted to assist PAPs based on their (i) tenorial status and (ii) size of their business. Payment for entitlements must be reflected in the Entitlement Matrix provided in the DRAM Manual.

8.11.1 Provision of Compensation

As defined in the E&E Matrix, cash compensation is provided to the following category of losses as specified in Table 8-12.

Table 8-12: Types of Losses and Recommended Income Restoration Measures

Type of Income Loss	Income Restoration Measures
For PAPs who permanently relocate to a place that makes former wage-based livelihood opportunities inaccessible and as a result need to find new employment or source of livelihood,	<ul style="list-style-type: none"> • Cash compensation for net salary for two months based on minimum wage; AND • Provision of skills training in anticipation of available job positions during construction and operation; and • Priority in employment during construction and operation stage of the project.
Agricultural landowners who are directly engaged in farming	<ul style="list-style-type: none"> • If feasible, land for land will be provided in terms of a new parcel of land of equivalent productivity, at a location acceptable to PAPs. Consultations with both women and men shall be held to guarantee same rights to both spouses or common law spouses in



Type of Income Loss	Income Restoration Measures
	<p>respect to resources and property ownership and management, whether titled or not (Sec. 19(f), RA 9710).</p> <ul style="list-style-type: none"> • For PAPs directly engaged in farming, a disturbance compensation equivalent to five times the average gross harvest for the last five years on the principal and secondary crops of the area acquired. (As adopted from R.A. 6389); and • Provision of skills training to qualify for job/livelihood opportunities near the relocation site.
For agricultural lessee	<ul style="list-style-type: none"> • Entitled to disturbance compensation equivalent to five times the average gross harvests on his/her landholding during the last five preceding calendar years as per RA 6389.
For Agricultural Tenants and Sharecroppers	<ul style="list-style-type: none"> • Financial assistance equivalent to the average gross harvest for the last three years and not less than PhP15,000 per hectare (E.O. 1035). • Rehabilitation assistance in the form of skills training and other development activities to be provided in coordination with other government agencies to be designed in consultation with eligible PAPs, including and women's organizations groups to ensure development of women-friendly and sustainable agriculture technologies;

8.11.2 Referral to Other Institutions

Other government agencies (GAS) such as PESO, DSWD, TESDA, DOLE could be tapped as partners in livelihood program for some of the available services. R.A. 8759 specifies provision of services for access to employment opportunities, employment referral, labor market information and job-skill matching which could be provided through the PESO. This office is being maintained by the Provincial Government and the other LGUs in partnership with Department of Labor and Employment (DOLE), SUCs, NGOs and community-based organizations.

8.11.3 Employment Opportunities Created by the Project

R.A.6685 – provides the policy that project contractors must hire at least 50% of the unskilled and thirty percent 30% of the skilled labor requirements from the local community in which the project will be undertaken. The project contractors should be required to prioritize qualified project affected persons in their personnel requirements, with equal opportunity for both men and women.

DPWH Dept Order No. 130, series of 2016). RA 6685 and RA 9710 (Magna Carta of Women) requires that the mandatory minimum requirement of 50% unskilled labor and 30% skilled labor shall be recruited and equally accessible to both women and men in various phases and stages of construction / civil works, from planning, design, pre-construction and construction, and maintenance for each project



Skills Training. DPWH could channel the skills training through TESDA, DOLE and DTI. A joint memorandum of agreement with these agencies will be needed to firm up the inter-agency commit for support on skills training and alternative livelihood. Skills training should be based on the preferred skill to by the project beneficiary.

8.11.4 Monitoring of Livelihood and Income Restoration

Procedures

1. The ESSD will be in charged to put in place a monitoring system that will track whether the: (i) planned livelihood programs were delivered specific to livelihood restoration are producing the desired outcomes.
2. Establish the formation of a monitoring agent, both internal and external (required when projects are funded by international agencies).
3. The designated internal monitoring will track the progress in the delivery of physical and financial targets, while the external monitoring will assess the effects and impact of the RAP implementation.
4. Use the monitoring indicators specific to livelihood.
5. Coordinate with the Committee on Livelihood (if any) and assess whether Committee members are functional.
6. Record the outputs or activities and timing undertaken by the Committee on Livelihood
7. Examine the MOA with Relevant Agencies on Provision of Livelihood – Depending on the provisions of the Executive Order (EO) or the Joint Memorandum Circular (JMC) for the creation of PIAC, a MOA may be executed between and among DPEH and the member-agencies of the Livelihood Committee.
8. Assess the status on the delivery of services by other Relevant Agencies on Provision of Livelihood – Coordination with relevant agencies will start prior to the implementation of LRIP and will continue during its implementation.
9. Monitor the types of livelihood assistance provided by partner agencies as specified in the MOA or JMC
10. Conduct a survey/FGD KII (bi-annual) to monitor compliance and evaluate status on affected livelihood of PAPs
11. Assess the timing on the implementation of the livelihood program (skills training received, number of participants both men and women receiving the training



12. Assess utilization of funds
13. Prepare a monitoring report on livelihood for integration in the overall monitoring of the project.
14. Identify gaps and recommend appropriate interventions to rectify the gaps.
15. Monitoring of the implementation of LRIP, identify gaps and recommend solutions to these gaps. Additionally, an external monitoring agent (EMA) will conduct monitoring during the whole duration of the project.

8.12 RAP Implementation Schedule and Budget

RAP document must show an indicative implementation schedule and the institutional requirement to carry out the RAP. The indicative schedule prepared in the preliminary RAP Feasibility stage will have to be validated during the DED stage to come up with the final RAP and implementation schedule. Before implementation, the final RAP will have to be validated based on DED results.

8.12.1 Institutional Arrangement

The institutional arrangement for the implementation of the RAP shall comprise of two entities namely:

- i. Resettlement Implementation Committee (RIC) – responsible to implement the ISF at the Regional/local
 - ii. DPWH UPMO- ESSD and DEO which are the key actors for the implementation.
1. DMS and supplemental SES as needed will be conducted after or simultaneous with the parcellary survey. During the DMS, affected structures will be measured and materials used will be recorded for the preparation of the Bill of Quantities and Bill of Materials. Additional SES will be conducted to cover the PAPs who were not included in the SES during FS RAP due to (i) change in final alignment or (ii) result of the boundary survey and parcellary survey.
 2. Finalization of RAP Report – Contents of preliminary RAP will be updated and finalized based on result of the parcellary survey and supplementary SES during DED
 3. Preparation of the validated RP based on final DED results.

8.12.2 Budget Allocation and Indicative Timeline for Implementation

The IA needs to ensure that budget shall be appropriated for the RA implementation. The budget shall include the amount needed for payment of compensation, other forms of assistance, funds for livelihood program (training) and development cost for resettlement site, in coordination with the NHA and LGU.

The indicative timeline is reflected in Table 8.9. Since the RAP is a living document, there may be some adjustment in the schedule even in the final RAP which is due to some circumstance beyond the project management's control. Some of the reasons may be attributed to:

- Changes in project scope.
- Resources become unavailable.
- Objectives and deliverables are not realistic within the project constraints.
- Pandemic situation



- Expropriation proceedings

Table 8-13: Indicative Implementation Schedule of the Final RAP

Implementation Activities	Indicative Timeframe	Remarks
Appraisal of affected properties by GFI/IPA	2-3 months	Simultaneous with the DED
Issuance of Letter Offer	Within 15 days after appraisal	
Expropriation proceedings	6-12 months	
Clearing of ROW	6-10 months	
Downloading of funds-based on JMC or MOA with partner agencies	1-2 months	
Verification of eligibility of PAPs	2-3 months	Depends on scale of impact/number of PAPs
Development of Resettlement site	1-12 months	Should be available before relocation
Site visit to resettlement site		For scheduling
Payment of Compensation	6-12 month	
Payment of other forms of assistance	6-12 months	
Formation of committee on Livelihood	1 -2 months	
Inter-agency coordination meetings	Every month	As needed
Implementation of the LIRP	1-12 months	Immediately after relocation
Internal monitoring by ESSD	Semi-annual	

8.13 Monitoring Report and Evaluation

Overview:

The Environmental and Social Services Office (ESSD) under D.O. 58 of the DPWH shall conduct the supervision and in-house monitoring of implementation of the RAPs and the IPAPs (for affected IPs outside the ancestral domain) and will be alternately called the Internal Monitoring Agent (IMA). The procedure for monitoring Memoranda of Agreement (MOA) that the project proponent enters into with affected IPs inside Ancestral Domains or with non-IPs will be guided by the monitoring, evaluation, and reporting arrangements established in a MOA.

Objective: To monitor the status of safeguard mitigations (RAP/IPP) and its compliance to the Project Policy

Deliverables: Internal Monitoring Report

Timing: During and After Implementation Stage (Semi-Annual; Annual) Lead: ESSD/PIU/UPMO

References: Annex 8-8, Department Order (DO) No.5, s. of 2003; DO 327 s of 2003

LARRIP, LAPRAP

8.13.1 General Guidelines

1. Based on DO 327 s. 2003, the IO will assist in the monitoring and implementation of the LAPRAP.



2. The standard for survey on monitoring will utilize at least 20%⁴¹ as representative sampling size for the quantitative results.
3. Various methods will be used (FGDs, KII) to capture the qualitative results based on the objectives and target in the RAP
4. There should be a delineation on who will do the monitoring in the Region⁴²
5. Current practice in the Region involves the concerned District Engineering Office (DEO), Regional Office (RO), and the Resettlement Implementation Committee (RIC).
6. Record all grievances and their resolution and ensure that complaints are dealt with promptly.
7. The following monitoring activities and report shall be prepared:

8.13.1.1 Semi-Annual Monitoring

The IM Team will be required to conduct a Semi-Annual monitoring of the RAP implementation activities. The ESSD, in coordination with Regional Coordinators shall set the schedule for the implementation of RAPs and IPAPs and the required monitoring considering the project's implementing schedule. It is expected that one month prior to the start of the civil works, all RAP and IPAP activities have been

8.13.1.2 Final Evaluation

Final evaluation of the implementation of the LARRIPP will be conducted three months after the completion of payments of compensation to PAPs and three months after completion of the IPAP.

8.13.1.3 Post-Evaluation

This activity will be undertaken a year after the completion of the project, to determine whether the social and economic conditions of the PAFs and the affected IPs have improved/or not improved, after the implementation of the project.

The UPMO in coordination with the ESSD shall establish a schedule for the implementation of RAPs and IPAPs and the required monitoring considering the project's implementing schedule. It is expected that one month prior to the start of the civil works, all RAP and IPAP activities have been determined by the IMA and EMA as having been concluded.

8.13.2 Procedures For Internal Monitoring⁴³

1. Request for a copy of the Right-of Way Action Plan Report.
2. Request for a Coordination Meeting with the Implementing Office/Proponent and the staffs involved in the project.
3. During the Meeting, discuss the objectives of the Internal Monitoring and the role of the Internal Monitoring Agent. Request for the status of acquisition/implementation of the RAP including the

⁴¹ As agreed during the Workshop on Preparing the RAP Report and Monitoring Report, August 16-17 2021. This target is also acceptable by international funders like ADB, World Bank and JICA.

⁴³ As prepared by the ESSD



status of payment of compensation.

4. Conduct a Coordination Meeting with Resettlement Implementation Committee. In case of no RIC formed for the project, identify the key stakeholders who are involved in the resettlement and rehabilitation activities and set a meeting with them to determine the grievances of the PAPs and the response/ measures made to address the grievances.
5. During the meeting, discuss/inquire about the status of resettlement and rehabilitation programs as proposed in the RAP report. Inquire about the outcome of the rehabilitation activities/trainings and the grievances filed by the PAFs. Request to Minutes of the Meeting, Photographs and Attendance sheets of the conducted activities.
6. Prepare Invitation letter for the conduct of Public Consultation with affected families who have been relocated to the relocation site. Inquire about their experiences on the whole relocation process. Facilitate the meeting using the guide question below:
 - a. Does house quality meet the standards agreed?
 - b. Have relocation sites been selected and developed as per agreed standards?
 - c. Are the PAFs occupying the new houses?
 - d. Are assistance measures being implemented as planned for host communities?
 - e. Is restoration proceeding for social infrastructure and services?
 - f. Are the PAFs able to access schools, health services, cultural sites and activities at the level of accessibility prior to resettlement?
 - g. Are income and livelihood restoration activities being implemented as set out in the income restoration plan?
7. Request for the contact number of the owners of the private assets, invite them for an interview to determine the impact of the project in their living status.
8. Conduct comparative analysis base on the result of the interview. Compare the data presented in the RAP Report with the data gathered during the conduct of interviews and meeting
9. Prepare report using the Internal Monitoring Report Outline prepared by ESSD attached as Annex 8-8.
10. Fill out required information in **Monitoring Form 8.13.2 Internal Monitoring Report**



9 INDIGENOUS PEOPLE

9.1 Background

The National Commission on Indigenous Peoples (NCIP) is mandated under Republic Act 8371, also known as the Indigenous Peoples Rights Act (IPRA) of 1997, to establish a Five-Year Master Plan. "Based on the Ancestral Domain Sustainable Development and Protection Plans (ADSDPP) of the various Indigenous Cultural Communities/Indigenous Peoples (ICCs/IPs) and other relevant information, the Office on Policy, Planning and Research (OPPR) shall formulate a Five-Year Master Plan for the delivery of appropriate support services to the various Indigenous Cultural Communities/Indigenous Peoples (ICCs/IPs), the Office on Policy, Planning and Research (OPPR) shall formulate a Five-Year Master.

The IPRA, as an expression of Indigenous Peoples' rights and aspirations, established a legislative framework for the preservation and development of ICCs/IPs and rectified historical mistakes that led to systemic dispossession and discrimination against Indigenous Peoples. IPRA upholds the state's constitutional mandate to develop a policy "to recognize and promote the rights of ICCs/IPs within the context of national unity and development," and "to protect the rights of Indigenous Cultural Communities to their ancestral lands to ensure their economic, social, and cultural well-being."

The applicability of this Principle was established during the Social and Environmental Assessment process. In contrast, implementing the actions necessary to meet this Principle's requirements is managed through the Client's Social and Environmental Management System (SEMS).

In many discourses, there is no universally accepted definition of "Indigenous Peoples." Indigenous Peoples may be referred to in different countries by such terms as "Indigenous ethnic minorities," "aboriginals," "hill tribes," "minority nationalities," "scheduled tribes," "first nations," or "tribal groups." In this Principle, the term "Indigenous Peoples" is used in a generic sense to refer to a distinct social and cultural group possessing the following characteristics in varying degrees:

- Self-identification as members of a distinct indigenous cultural group and recognition of this identity by others
- Collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and environments therein or those who have lost the collective attachment to different habitats because of forced severance, conflict, government resettlement programs, land dispossession, natural disasters or incorporation of their territories into an urban area
- Customary cultural, economic, social, or political institutions that are separate from those of the dominant society or culture
- An indigenous language, often different from the official language of the country or region. Ascertaining whether a particular group is considered Indigenous Peoples for this Principle may require technical judgment or inputs from competent professionals.



9.2 The IPs in the Philippines

IPRA specifically defines the indigenous peoples in the Philippines as follows:

Indigenous Cultural Communities/Indigenous Peoples - refer to a group of people or homogenous societies identified by self-ascription and ascription by others, who have continuously lived as an organized community on communally bounded and defined territory, and who have, under claims of ownership since time immemorial, occupied, possessed and utilized such environments, sharing common bonds of language, customs, traditions, and other distinctive cultural traits, or who have, through resistance to political, social and cultural inroads of colonization, non-indigenous religions, and cultures, become historically differentiated from the majority of Filipinos. ICCs/IPs shall likewise include peoples who are regarded as indigenous on account of their descent from the populations which inhabited the country, at the time of conquest or colonization, or at the time of inroads of non-indigenous religions and cultures, or the establishment of present state boundaries, who retain some or all of their own social, economic, cultural and political institutions, but who may have been displaced from their traditional domains or who may have resettled outside their ancestral territories (Chapter III, Section 3(h).)

In the Philippines, there are roughly 110 ethnolinguistic groups, totaling 14 million people. Mindanao has 63% of the IP population, Luzon has 34%, and the Visayas has 3%. For IP representation to the NCIP, the IPRA divides the country into seven ethnographic regions: I Region 1 and Cordillera; (ii) Region 2; (iii) the rest of Luzon; (iv) Island Groups including Mindoro, Palawan, Romblon, Panay, and the rest of the Visayas; (v) Northern and Western Mindanao; (vi) Southern and Eastern Mindanao; and (vii) Central Mindanao for purposes of IP representation to the NCIP.

The projected extent of IP ancestral domains/ancestral lands (ADs/ALS) is about 7.7 million hectares. As of December 2010, the NCIP's Ancestral Domain Office (ADO) stated that 221 CADT/applications totaling 5.4 million hectares had been authorized, while 130 CADT/applications totaling more than 3 million hectares were still in different stages of the titling process. There are 912,395 registered right holders among the authorized CADTs. The NCIP has also allowed 258 CALTs with a total area of 17 307.17 hectares and 8,609 rights holders. The status of CADT/CALT applications is shown in **Error! Reference source not found..** Despite the abundant natural riches of the ancestral domain, the IPs remains one of the country's most vulnerable sections, accounting for around 17% of the population.

9.3 ADSDPP Priority Programs and Projects for Sustainable Development

The IPRA mandates that the four rights bundles develop development programs, projects, and activities. "ICCs/IPs involved should create their own Ancestral Domain Sustainable and Development and Protection Plan (ADSDPP) under their customary practices, laws, and traditions," according to IPRA's IRR.⁴⁴

⁴⁴ Section 2, Part II, Rule VIII, IRR, IPRA



Of the 90 ADSDPPs have been formed as of December 31, 2010, with another 25 in the works and the remainder in various stages of development.⁴⁵ Twenty-six (26) of the 90 ADSDPPs established to date are supported under UNDP's Integrated Programme for Indigenous Peoples' Empowerment and Sustainable Development of Ancestral Domains Projects (IP-EIPSDADs).

The indigenous peoples' intended development interventions in their respective communities are reflected in the Priority Development Projects from the ICCs/IPs throughout ethnographic areas. Protecting indigenous culture, customs, and institutions and promoting self-governance and social justice are top priorities for the ADSDPPs. In the ancestral domain, intended development interventions include sustainable agriculture and natural resource management, and livelihood and income-generating activities. The IPs' most important development initiatives are in the following areas:

Protection and Sustainable Development and Management of Ancestral Lands and Domain and Natural Resources	
<i>Agriculture</i>	<ul style="list-style-type: none"> ○ Irrigation System ○ Integrated Area/Community Development ○ Organic Farming ○ Agro-Forestry Development ○ Mainstreaming IP Products in the Market Chain ○ Abaca and Coffee Inter-cropping ○ Integrated Area Development ○ Fruit Trees Plantation ○ Nursery Development and Seedling Production ○ Provision of Agricultural Equipment ○ Rubber Plantation ○ Mushroom Production
<i>Environment</i>	<ul style="list-style-type: none"> ○ Living Perimeter Fence ○ Agro-Forestry ○ Land Management Protection/Land Delineation ○ Watershed Management and Protection ○ Integrated Area/Community Development ○ Community-based Environmental Protection ○ Eco-Tourism Development ○ Seed and Plant Propagation ○ Forest Protection/Conservation and Community Development ○ Forest for Carbon Protection ○ Philippine Eagle and Wildlife Sanctuary/Biodiversity ○ Climate Change Adaptation ○ River Rehabilitation ○ Soil Conservation and Management
<i>Mineral Resources</i>	<ul style="list-style-type: none"> ○ Sand and Gravel Trading/River basin Management <p><i>Note that different IP communities have varied opinions on the various projects. Although communities typically agree on whether to accept or reject such projects based on the FPIC process, there is a mixed response to these developments.</i></p>

Self Determination and Governance

⁴⁵ Section 2 (a) Chapter 1 General Provisions, IPRA



<i>ICC/IP Development</i>	<ul style="list-style-type: none"> ○ Indigenous Peoples Organization (IPOs) ○ FPIC-MOA monitoring of company compliance with the IPs/ICCs ○ Gender and Development (GAD)
<i>Partnership</i>	<ul style="list-style-type: none"> ○ LGU – Indigenous Peoples Partnership ○ MINDA-opening of IP desk, policy advocacy ○ Creation of Tribal barangays with the DILG and the LGUs. ○ IP mandatory representation in local legislative councils and policy-making bodies in coordination with LGUs. ○ Certificate of Confirmation of tribal membership in coordination with the National Statistics Office (NSO). ○ Equality of both men and women IPs in opportunities (GAD) ○ In coordination with the Philippine Commission on Women. ○ Documentation of Human Rights Violation on IPs, this is to include children-in-armed conflict (CIAC) in coordination with the Police, military, OPAPP, and the DESWD. ○ Alternative dispute resolution through the customary way in coordination with the justice system (Supreme Court) ○ Monitoring of concluding observation of UN on International treaties on discrimination and human rights violations.

<i>Protecting and Promoting Social justice and Human Rights</i>	
<i>Education</i>	<ul style="list-style-type: none"> ○ Skills Training for livelihood, Agriculture and Natural Resource Management (NRM) ○ Access to all levels and types of education ○ Development of IP teachers and different officials ○ Professional training ○ Affirmative action ○ Access to Educational Assistance
<i>Health</i>	<ul style="list-style-type: none"> ○ Access to Health Services ○ Indigenous Health Knowledge and Practices ○ Health Facility
<i>Water System</i>	<ul style="list-style-type: none"> ○ Spring Development ○ Water harvesting ○ Potable water supply
<i>Livelihood</i>	<ul style="list-style-type: none"> ○ Development of Business planning ○ Product development ○ Market development and networking ○ Organic Handicraft Development ○ Wood Processing ○ Community-Based Tourism ○ Organic Vegetable processing technology ○ Bamboo Production and Processing ○ Fertilizer Production ○ Organic Livestock Dispersal/Production ○ CutfLOWER Production ○ Organic Crop Production ○ Wine Making ○ Vinegar Production
<i>Public Works</i>	<ul style="list-style-type: none"> ○ Barangay/Tribal Health Centers ○ Farm to Market Roads ○ School Buildings ○ Multi-purpose Livelihood Centers ○ IP Multi-purpose Centers ○ Mini-Infrastructure (greenhouse nursery,



<i>Protecting and Promoting Social justice and Human Rights</i>	
	<ul style="list-style-type: none"> ○ Water harvesting facility
<i>Legal Aid</i>	<ul style="list-style-type: none"> ○ Financial Support to litigants and their witnesses. ○ Paralegal Training to IPs.
<i>Promotion and defense of human rights</i>	<ul style="list-style-type: none"> ○ Documentation of Human Rights Violation ○ IEC on human rights ○ AD as a peace zone ○ Formation of paralegal groups ○ Creation of IP desk in all agencies ○ Assistance to Internally Displaced Persons (IDPs) and victims of armed conflict ○ Study on Child labor and child soldier ○ Illegal arrest and detention

<i>Protection and Preservation of IP Culture, Tradition, and Institutions</i>	
<i>Culture and Tradition</i>	<ul style="list-style-type: none"> ○ Heritage Preservation and Promotion ○ Establishment of Cultural Heritage Center ○ Sacred Site Development ○ Documentation of Indigenous Knowledge Systems and Practices (IKSPs)
<i>Institutions</i>	<ul style="list-style-type: none"> ○ Documentation of Customary Laws ○ Strengthening of IP Institutions
<i>Feature and Traditional Landmarks</i>	<ul style="list-style-type: none"> ○ Recognition and Protection (durable marker)

9.4 Importance of Indigenous Peoples in Sustainable Development

Indigenous peoples are inextricably linked to the land they live in and the natural resources on which they rely. As a result, if their land and resources are changed, infringed upon, or badly deteriorated, they are highly vulnerable. Indigenous Peoples' usage of language, cultural traditions, institutional structures, and religious or spiritual beliefs that they view as vital to their identity or well-being may also be jeopardized by projects. On the other hand, projects have the potential to improve Indigenous Peoples' quality of life and well-being significantly. Access to markets, schools, clinics, and other services to improve people's living conditions may be enhanced through a project.

9.5 General Requirements: Avoidance of Adverse Impacts

The Client will identify through a process of Social and Environmental Assessment or Cultural Heritage Impact Assessment (CHIA) all communities of Indigenous Peoples who may be affected by the project within the project's area of influence, as well as the nature and degree of the expected social, cultural (including cultural heritage), and environmental impacts on them, and avoid adverse consequences whenever feasible.



When alternatives have been explored, and avoidance is not feasible, the Client will minimize, restore, and compensate for these impacts in a culturally appropriate manner commensurate with the nature and scale of such effects and the vulnerability of the Affected Communities of Indigenous Peoples. The Client's proposed action will be developed with the informed participation of affected Indigenous Peoples and contained in a time-bound plan, such as an Indigenous Peoples.

Additional client requirements on the Protection of cultural heritage are set out in Indigenous Peoples' Development Plan (IPDP), or a broader community development plan with separate components for Indigenous Peoples.

9.5.1 Participation and Consent

The Client will establish an ongoing relationship with the affected communities of Indigenous Peoples as early as possible in the project planning and throughout the project phases. In projects with adverse impacts on affected communities of Indigenous Peoples, the consultation process will ensure their Free, Prior, and Informed Consent (FPIC) and facilitate their informed participation on matters that affect them directly, such as proposed mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

The community engagement process will be culturally appropriate and commensurate with the risks and potential impacts to the Indigenous Peoples. In particular, the process will include the following steps:

- Involve Indigenous Peoples' representative bodies (for example, councils of elders or village councils, among others) as well as members of the Affected Communities of Indigenous Peoples.
- Be inclusive of both women and men and various age groups in a culturally appropriate manner.
- Provide sufficient time for Indigenous Peoples' decision-making processes
- Facilitate the Indigenous Peoples' expression of their views, concerns, and proposals in the language of their choice, without external manipulation, interference, or coercion, and without intimidation; and
- Ensure that the grievance mechanism established for the project is culturally appropriate and accessible for Indigenous Peoples.

FPIC applies to project design, implementation, and expected outcomes related to impacts affecting Indigenous Peoples' communities. When any of these circumstances apply, the Client will engage external experts to identify the project risks and consequences. The Client will ensure that FPIC builds on and expands the process of Informed Consultation and Participation (ICP). To achieve FPIC, unanimity is not necessarily required. FPIC can also be achieved when individuals or groups within the community explicitly disagree, and the following should be documented:

- The mutually accepted process between the Client and Affected Communities; and



- Agreement evidence between parties as to the outcome of the negotiations.

The determination of the appropriate plan will require technical judgment. A community development plan may be proper when Indigenous Peoples are integrated into larger affected communities.

Likewise, internal decision-making procedures are usually, but not always, collaborative. Internal opposition may exist, and members of the community may contest decisions. The consultation process should be attentive to such dynamics and give enough time for internal decision-making processes to achieve findings that are deemed valid by the majority of the people concerned.

9.5.2 Mitigation and Development Benefits

Suppose the Client will attempt to identify mitigation measures that are in line with the mitigation hierarchy and the potential for culturally acceptable and sustainable development benefits through the FPIC process of the impacted Indigenous Peoples groups. Such possibilities should be proportionate to the magnitude of project impacts to enhance their standard of living and livelihoods in a culturally acceptable way while also promoting the long-term sustainability of the natural resource they rely on. The Client should record identified mitigation and development advantages and provide them to Affected Indigenous Communities in a timely and equitable manner.

For the determination, delivery, and distribution of compensation and other benefit-sharing measures, the laws, institutions, and customs of the Affected Communities of Indigenous Peoples shall be considered. Compensation eligibility might arise on a collective, individual, or combined basis. Where ownership of resources, assets, and decision-making is primarily collective, the Client should make every effort to ensure that benefits and remuneration are collective and consider intergenerational differences and requirements. The Client can utilize certain variables to assess how the project will help the Affected Communities of Indigenous Peoples.

These variables include, but are not limited to, the project's nature, project setting, and community vulnerability. The Client should create possibilities aimed at achieving the needs and preferences of Indigenous Peoples, such as increasing their living and livelihood standards in a culturally acceptable way. The Client should also ensure the long-term viability of the natural resources on which Indigenous Peoples thrive.

9.6 Programs and Projects under Consideration

With the collaboration of partner agencies, culture-sensitive programs and initiatives with affirmative action are the significant drivers of IPs/ICC empowerment.

<i>Protection and Sustainable Development and Management of Ancestral Lands and Domain and Natural Resources</i>			
<i>AREAS OF CONVERGENCE</i>	<i>ADSDPPS DEFINED PRIORITY PROGRAMS AND PROJECTS</i>	<i>IPMAP DEVELOPMENT PROGRAMS, PROJECTS, AND SERVICES</i>	<i>RESPONSIBLE PARTY</i>
<i>CADT</i>	<ul style="list-style-type: none"> ○ Issuance of CADTs ○ Registration of CADTs 	AD/AL Titling and Registration	NCIP, DENR, LGUs, IPOs, NGOs, LRA, DOJ



<i>Protection and Sustainable Development and Management of Ancestral Lands and Domain and Natural Resources</i>			
<i>AREAS OF CONVERGENCE</i>	<i>ADSDPPS DEFINED PRIORITY PROGRAMS AND PROJECTS</i>	<i>IPMAP DEVELOPMENT PROGRAMS, PROJECTS, AND SERVICES</i>	<i>RESPONSIBLE PARTY</i>
<i>Agriculture</i>	<ul style="list-style-type: none"> ○ Irrigation System ○ Integrated Area/Community Development ○ Organic Farming ○ Agro-Forestry Development ○ Mainstreaming IP Products in the Market Chain ○ Abaca and Coffee Inter-cropping ○ Integrated Area Development ○ Fruit Trees Plantation ○ Nursery Development and Seedling Production ○ Provision of Agricultural Equipment ○ Rubber Plantation ○ Mushroom Production 	IP Agro-Forestry Development Program (AFDP).	DA, DENR, DAR, NCIP, IPOs, NGOs, Private Sector, DTI, CDA
<i>Environment</i>	<ul style="list-style-type: none"> ○ Living Perimeter Fence ○ Agro-Forestry ○ Land Management Protection/Land Delineation ○ Watershed Management and Protection ○ Integrated Area/Community Development ○ Community-based Environmental Protection ○ Eco-Tourism Development ○ Seed and Plant Propagation ○ Forest Protection/Conservation and Community Development ○ Forest for Carbon Protection ○ Philippine Eagle and Wildlife Sanctuary/Biodiversity ○ Climate Change Adaptation ○ River Rehabilitation ○ Soil Conservation and Management 	Ancestral Domain Environmental Management (ADEM) Program	DENR, DA, DAR, NCIP, IPOs, NGOs, Private Sector



Protection and Sustainable Development and Management of Ancestral Lands and Domain and Natural Resources			
AREAS OF CONVERGENCE	ADSDPPS DEFINED PRIORITY PROGRAMS AND PROJECTS	IPMAP DEVELOPMENT PROGRAMS, PROJECTS, AND SERVICES	RESPONSIBLE PARTY
<i>Mineral Resources</i>	<ul style="list-style-type: none"> Sand and Gravel Trading/River basin Management <p><i>Note: There are mixed responses from IP on these projects, although communities usually agree on whether to approve or oppose such projects by the FPIC process.</i></p>	FPIC process	NCIP, IPOs

Strengthening of Self-Determination of the Indigenous Peoples			
AREAS OF CONVERGENCE	ADSDPPS DEFINED PRIORITY PROGRAMS AND PROJECTS	IPMAP DEVELOPMENT PROGRAMS, PROJECTS, AND SERVICES	RESPONSIBLE PARTY
<i>ICC/IP Development Partnership</i>	<ul style="list-style-type: none"> Empowerment of Indigenous Peoples Organization (IPOs) 	Completion of AD/AL Titling and Registration	NCIP, DENR LGUs, IPOs, NGOs, LRA, DOJ
	<ul style="list-style-type: none"> FPIC-MOA monitoring of company compliance with the IPs/ICCs 	Completing and supporting the formulation of ADSDPP	IPOs, NCIP, LGUs, NGOs, concerned NGAs
	<ul style="list-style-type: none"> Gender and Development (GAD) 	They are strengthening the Participation of IPOs/ICCs in national and local government bodies.	NCIP, DILG, NEDA, LGUs, IPOs, NGOs
		Monitoring of FPIC	NCIP, IPOs,
	<ul style="list-style-type: none"> LGU – Indigenous Peoples Partnership MINDA-opening of IP desk, policy advocacy Creation of Tribal barangays with the DILG and the LGUs. IP mandatory representation in local legislative councils and policy-making bodies in coordination with LGUs. Certificate of Confirmation of tribal membership in coordination with the National Statistics Office (NSO). 	Promotion of Social Dialogue	IPs/ICCs, LGUs, NGOs, NGOs, POs, Private Sector, Development Partners, concerned NGAs.



<i>Strengthening of Self-Determination of the Indigenous Peoples</i>			
AREAS OF CONVERGENCE	ADSDPPS DEFINED PRIORITY PROGRAMS AND PROJECTS	IPMAP DEVELOPMENT PROGRAMS, PROJECTS, AND SERVICES	RESPONSIBLE PARTY
	<ul style="list-style-type: none"> ○ Equality of both men and women IPs in opportunities (GAD). In coordination with the Philippine Commission on Women. ○ Documentation of Human Rights Violation on IPs, this is to include children-in-armed conflict (CIAC) in coordination with the Police, military, OPAPP, and the DSWD. ○ Alternative dispute resolution through the customary way in coordination with the justice system (Supreme Court) ○ Monitoring of concluding observation of UN on International treaties on discrimination and human rights violations. 		



<i>Protecting and Promoting Social Justice and Human Rights of ICCs/IPs</i>			
AREAS	ADSDPPS DEFINED PRIORITY PROGRAMS AND PROJECTS	IPMAP DEVELOPMENT PROGRAMS, PROJECTS, AND SERVICES	RESPONSIBLE PARTY
<i>Education</i>	<ul style="list-style-type: none"> ○ Skills Training for livelihood enterprise, Agriculture and Natural Resource Management (NRM) ○ Access to all levels and types of education ○ Development of IP teachers and different officials ○ Professional training ○ Affirmative action ○ Access to Educational Assistance ○ Sufficient knowledge of their rights and how defended 	Provision and Convergence of Basic Services to IP communities.	DepEd, TESDA, CHED, DOH, DSWD, DA, DENR, DTI, DOLE, DOE, DILG, LGUs, NGOs, IPOs, CDA, PHIC, NAPC, Development Partners
<i>Health</i>	<ul style="list-style-type: none"> ○ Access to Health Services ○ Indigenous Health Knowledge and Practices ○ Health Facility 		
<i>Livelihood</i>	<ul style="list-style-type: none"> ○ Development of Business planning and entrepreneurship ○ Product development ○ Market development and networking ○ Organic Handicraft Development ○ Wood Processing ○ Community-Based Tourism ○ Organic Vegetable processing technology ○ Bamboo Production and Processing ○ Fertilizer Production ○ Organic Livestock Dispersal/Production ○ CutfLOWER Production ○ Organic Crop Production ○ Wine Making ○ Vinegar Production ○ Fruit processing into various by-products 	Livelihood Development Programs for the IPs	NCIP, DTI, CDA, DA, DENR, LGUs, IPOs, Private Sector



<i>Public Works</i>	<ul style="list-style-type: none"> ○ Barangay/Tribal Health Centers ○ Farm to Market Roads ○ School Buildings ○ Multi-purpose Livelihood Centers ○ IP Multi-purpose Centers ○ Mini-Infrastructure (greenhouse nursery, Irrigation systems) 	Infrastructure Development in the IP communities.	LGUs, DPWH, DOH, PHIC, DOT, DepEd, DOE, CHED, TESDA,
<i>Water System</i>	<ul style="list-style-type: none"> ○ Spring Development/water walks ○ Water harvesting ○ Potable water supply 		
<i>Legal Aid</i>	<ul style="list-style-type: none"> ○ Financial Support to litigants and their witnesses. ○ Paralegal Training to IPs. ○ IPRA Advocacy to IP communities ○ Legal Assistance 	Strengthening Adjudication and Legal Services.	NCIP, IPOs, NGOs, DOJ, CHR
<i>Promotion and defense of human rights</i>	<ul style="list-style-type: none"> ○ Documentation of Human Rights Violation ○ IEC on human rights ○ Declaring ADs as a peace zone ○ Formation of paralegal groups ○ Creation of IP desk in all agencies ○ Assistance to Internally Displaced Persons (IDPs) and victims of armed conflict 	Human Rights Protection of IPs.	NCIP, IPOs, NGOs, CHR, LGUs, DND, AFP, PNP, NAPOLCOM, DOJ, and PHRC
		IP community representation on Peace Process	OPAPP, NCIP

Protection and Preservation of ICCs/IPs' Culture, Tradition, and Institutions			
AREAS	ADSDPPS DEFINED PRIORITY PROGRAMS AND PROJECTS	IPMAP DEVELOPMENT PROGRAMS, PROJECTS, AND SERVICES	RESPONSIBLE PARTY
Culture and Tradition/ Feature and Traditional Landmarks	<ul style="list-style-type: none"> ○ Heritage Preservation and Promotion ○ Establishment of Cultural Heritage Center ○ Sacred Site Development ○ Documentation of Indigenous Knowledge 	Establishment of IP Museum cum e-library.	NCIP, NCCA, NGOs, IPOs, concerned NGAs, Private sector, development partners
		Promotion and Institutionalization of Community Cultural Festivals	NCIP, NCCA, IPOs, NGOs, DepEd
		Development of Eco-Tourism Cultural Program	IPOs, NCIP, DOT, LGUs Private Sector



	<p>Systems and Practices (IKSPs)</p> <ul style="list-style-type: none"> Recognition and Protection of traditional landmarks (durable marker) The priority of customary law in dispute conflict resolutions 	Interfacing of IP Culture and Tradition in School Curriculum.	DepEd, NCIP, NCCA, NGOs, IPOs, Development Partners
Institutions	<ul style="list-style-type: none"> Documentation of Customary Laws Strengthening of IP Institutions 	Documentation of Customary laws and Indigenous Knowledge Systems and Practices	IPOs, NCIP, LGUs, NGOs, NCCA

9.6.1 Impacts on Traditional or Customary Lands under Use

Indigenous Peoples are frequently inextricably linked to their traditional or customary lands and the natural resources in each area. While these properties may not be legally owned under national law, the use of these lands by Indigenous Peoples communities for their livelihoods or cultural, ceremonial, or spiritual purposes that define their identity and community may frequently be proven and recorded. Suppose the Client proposes to locate the project on, or commercially develop natural resources situated in, traditional or customary lands underuse, and adverse impacts on the livelihoods, cultural, ceremonial, or spiritual purposes that define the identity and community of Indigenous Peoples can be expected. In that case, the Client should respect their use by taking the following steps: Such negative consequences may include the loss of access to assets or resources and limits on land usage as a result of project operations.

- The Client should document its efforts to avoid or at least minimize the size of land proposed for the project.
- The Client should document its efforts to avoid or at least minimize the impacts on natural resources and natural areas of importance (e.g., loss of access to assets or resources or restrictions on land use resulting from the Client's project) to the Indigenous People.
- The Client should identify and review all property interests and traditional resource uses before land purchase and lease;
- The Indigenous Peoples' resource use should be documented by experts in collaboration with the affected communities of Indigenous Peoples without prejudicing any Indigenous Peoples' land claim. The assessment should be gender inclusive and specifically consider women's role in the management and use of these resources.
- The affected communities of Indigenous People should be informed of their rights concerning these lands under national laws, including any national law recognizing customary rights or use.



- The Client should offer affected communities of Indigenous Peoples at least compensation and due process in the case of commercial development of their land and natural resources, along with culturally appropriate sustainable development opportunities, including the Client should provide land-based compensation or compensation-in-kind instead of cash compensation.

When the project results from loss of access to and loss of natural resources independent of project land acquisition, the Client should ensure the affected communities of Indigenous People will have continued access to natural resources, identify the equivalent replacement resources for them or, provide compensation and alternative livelihoods.

When the project utilizes resources that are central to the identity and livelihood of the Affected Communities of Indigenous Peoples, the Client should ensure a fair and equitable share of benefits associated with that use of resources.

The Client should provide the Affected Communities of Indigenous Peoples access, usage, and transit on land it is developing and subject to health, safety, and security considerations.

The Client should enter into good-faith negotiation with the affected communities of Indigenous Peoples and document their informed participation and the successful outcome of the talks. While this requires substantiation and documentation of the use of such land, clients should also be aware that the land may already be under alternative service, as designated by the host government. If, under some circumstances, the Client is not able to provide a suitable land replacement, the Client should provide such verification. In this case, the Client will give non-land-based income-earning opportunities over and above cash compensation to the affected communities of Indigenous Peoples.

9.6.2 Relocation of Indigenous Peoples from Lands and Natural Resources Subject to Traditional Ownership or Customary Use

The Client should consider feasible alternative project designs to avoid the relocation of Indigenous Peoples from their communally held traditional or customary lands and natural resources. If such relocation is unavoidable, the Client should not proceed with the project unless FPIC has been reached as described above. Any relocation of Indigenous Peoples should be consistent with the Resettlement Planning and Implementation requirements, whereby the relocated Indigenous Peoples should be able to return to their traditional or customary lands if the reason for their relocation ceases to exist.

9.6.3 Proposed Projects with Special Focus on Indigenous Peoples

The Client shall proactively engage with the appropriate Indigenous Peoples to ensure their ownership and involvement in project design, execution, monitoring, and assessment for initiatives designed specially to offer direct benefits to Indigenous Peoples. The Client shall also engage with them on the cultural appropriateness of planned services or facilities and identify and resolve any economic or social restrictions (including gender-related constraints) that may limit their ability to profit from or participate in the project.



9.6.4 Providing Access to Project Benefits on an Equal Terms

If the Indigenous Peoples are not the exclusive beneficiaries of a project, the planning standards will change depending on the circumstances. The Client will develop and implement the project that affected Indigenous Peoples have equal access to the project's benefits. Meaningful consultation and project design will meet Indigenous Peoples' concerns or preferences. Documentation will summarize the consultation results and show how Indigenous Peoples' issues have been handled in project design. There will also be a description of the arrangements for continued consultations during implementation and monitoring.

If particular activities about providing equitable access to project benefits occur during the implementation phase, the Client will create a time-bound action plan, such as an Indigenous Peoples plan. Alternatively, a more comprehensive integrated community development plan containing required information about the impacted Indigenous Peoples may be developed when applicable.

If there are instances involving the extreme vulnerability of IPs in the geographically isolated areas with little external interaction, sometimes described as persons "in voluntary isolation" or "in initial contact," Projects having possible impacts on these peoples need proper steps to acknowledge, respect, and preserve their land and territories, environment, health, and culture, as well as efforts to avoid any unwanted interaction with them as a result of the project.

9.6.5 Meaningful Consultation Tailored to Indigenous Peoples

The Client should engage affected Indigenous Peoples to promote successful project design, establish local project support or ownership, and reduce the risk of project-related delays or controversies. This engagement approach will involve stakeholder analysis and planning, information sharing, and meaningful dialogue in a culturally appropriate and gender and intergenerationally inclusive way. Furthermore, this approach will:

- Involve Indigenous Peoples' representative bodies and organizations (e.g., councils of elders, village councils, or chieftains) and, where appropriate, other community members.
- Allow sufficient time for Indigenous Peoples' decision-making processes; and
- Allow for Indigenous Peoples' effective participation in the design of project activities or mitigation measures, where applicable.

9.6.6 Relocation of Indigenous Peoples from Lands and Natural Resources Protected in Traditional Ownership or Used or Occupied Customarily

To avoid removing Indigenous Peoples from communally owned or connected land and natural resources subject to traditional ownership, customary usage, or occupation, the Client should investigate or propose possible alternative project designs. If such relocation is inevitable, the Client should not proceed with the project until the FPIC has been acquired; the Client will not resort to forceful eviction. Any relocation of Indigenous Peoples will be by IPRA law.



9.6.7 Grievance Mechanism

The Client should ensure that a grievance process is developed for the culturally acceptable and accessible project to impacted Indigenous Peoples and that it considers the availability of legal avenues and traditional Indigenous dispute resolution mechanisms.

Complaints or grievances from stakeholders are unavoidable throughout the implementation of a project. The grievance resolution mechanism (GRM) will be utilized to IP issues or grievances about projects. The GRM will be communicated to all impacted IP households via community assemblies and/or IP community leaders. To guarantee that the GRM is accessible to community members, the help of IP community leaders must be sought.⁴⁶

What is A Grievance Redress Mechanism?

Grievance Redress Mechanisms (GRMs) are procedures for raising and resolving grievances. GRM enables impacted persons or communities to communicate their questions or concerns to the project's proponent/implementor and have them handled promptly and consistently. When used correctly, they have the potential to provide a more efficient, rapid, and cost-effective method of resolving disputes for both project implementers and communities.

A grievance resolution system is critical for promoting healthy stakeholder relationships by resolving concerns and avoiding conflicts from growing, and for facilitating learning in order to enhance impact management.

Therefore, a Grievance Mechanism is a proactive and systematic process for receiving, acknowledging, investigating, responding to, and resolving complaints and grievances from local stakeholders/right holders in a planned, timely, and courteous way.

A GRM can take on a variety of forms – judicial, institutional, or extrajudicial – and/or be based on existing traditional justice systems and institutions. What matters is that all parties agree on the process and that it be perceived as fair, unbiased, transparent, and accessible, as well as having sufficient authority to act on complaints made to it.

The method should simplify the filing of complaints by/from communities and provide a way of documenting a comprehensive enumeration of the issues and concerns made by communities.

Alternative Dispute Resolution (ADR) mechanisms, especially those based on the value systems/customary law of Indigenous/traditional societies, are increasingly being acknowledged and accepted in various national legislation. Yet, the present legal framework for endorsing informal ADR

⁴⁶ <https://documents1.worldbank.org/curated/en/427291590651204163/pdf/Indigenous-Peoples-Policy-Framework.pdf>



processes and conclusions such as those made by the Council of Elders remains ambiguous, complicating the enforcement of the findings.⁴⁷

Conflict resolution and grievance redress are critical safety mechanisms incorporated within the GCF IP Policy. The envisioned GRM is guided by the IP Policy's objectives and guiding principles, including meaningful participation and FPIC of IPs in GCF-related activities, respect for IPs' self-determination and representation, gender and intergenerational equity, equitable access to GCF resources, a commitment not to finance activities that result in the involuntary resettlement (forced eviction) of IPs or compensation when necessary, and a commitment to capacity building.

These principles include the demand that remuneration and benefits be defined, supplied, and distributed in accordance with all applicable conventional and customary laws and institutions, as well as the duty to ensure gender equality.

The Policy's grievance resolution provisions use an integrated and multifaceted approach.

1. It entails the use of the GCF-certified entity's conflict resolution or problem-solving process, appropriate national laws/instruments, the GCF's independent redress mechanism, and project-level/indigenous justice.
2. The policy allows for the provision of financial and technical assistance to users of redress mechanisms.
3. Additionally, help may be sought at any time, including prior to the filing of a claim, through the GCF Independent Redress Mechanism (IRM) and the Secretariat's indigenous peoples' focal point.
4. Finally, if all grievance resolution mechanisms, including the IRM, fail to deliver, the GCF may use the Accreditation Agreement's judicial settlement processes.⁴⁸
5. Accredited Entities' Role in GRM: Ensuring Compliance
6. Along with their own GRM, accredited entities are expected to evaluate applicable customary law, relevant domestic legislation, relevant international treaties and agreements, the state's obligations, and the GCF's accountability systems.

When IPs make claims with the independent Redress Mechanism, the GCF supply chain actors are obliged to not only corporate and provide all necessary information, but also to promptly undertake corrective steps

Indigenous Peoples (IPs)	<p>Grievance mechanisms need to make a clear distinction between procedures used for mainstream local population and those for indigenous peoples. IPs have unique attributes, including language, culture, and political, economic, and social institutions. They are also more sensitive to issues such as alienation of customary land rights, claims to natural resources, and impacts on cultural property. In addition, IPs may be politically marginalized and unfamiliar with (or do not trust) engagement processes used by the mainstream society.</p> <p>Identify the established forms of representation and contact that exist between IP communities and government, community leaders, and civil society, and determine what mechanisms exist to promote transparent, respectful dialogue with IP groups.</p>
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⁴⁷ <https://www.tebtebba.org/index.php/clua-articles/making-the-gcp-ip-policy-work-for-ips-dealing-with-grievance>

⁴⁸ Ibid



mandated by the Board on the suggestion of the independent Redress Mechanism' (GCF IP Policy para.71)

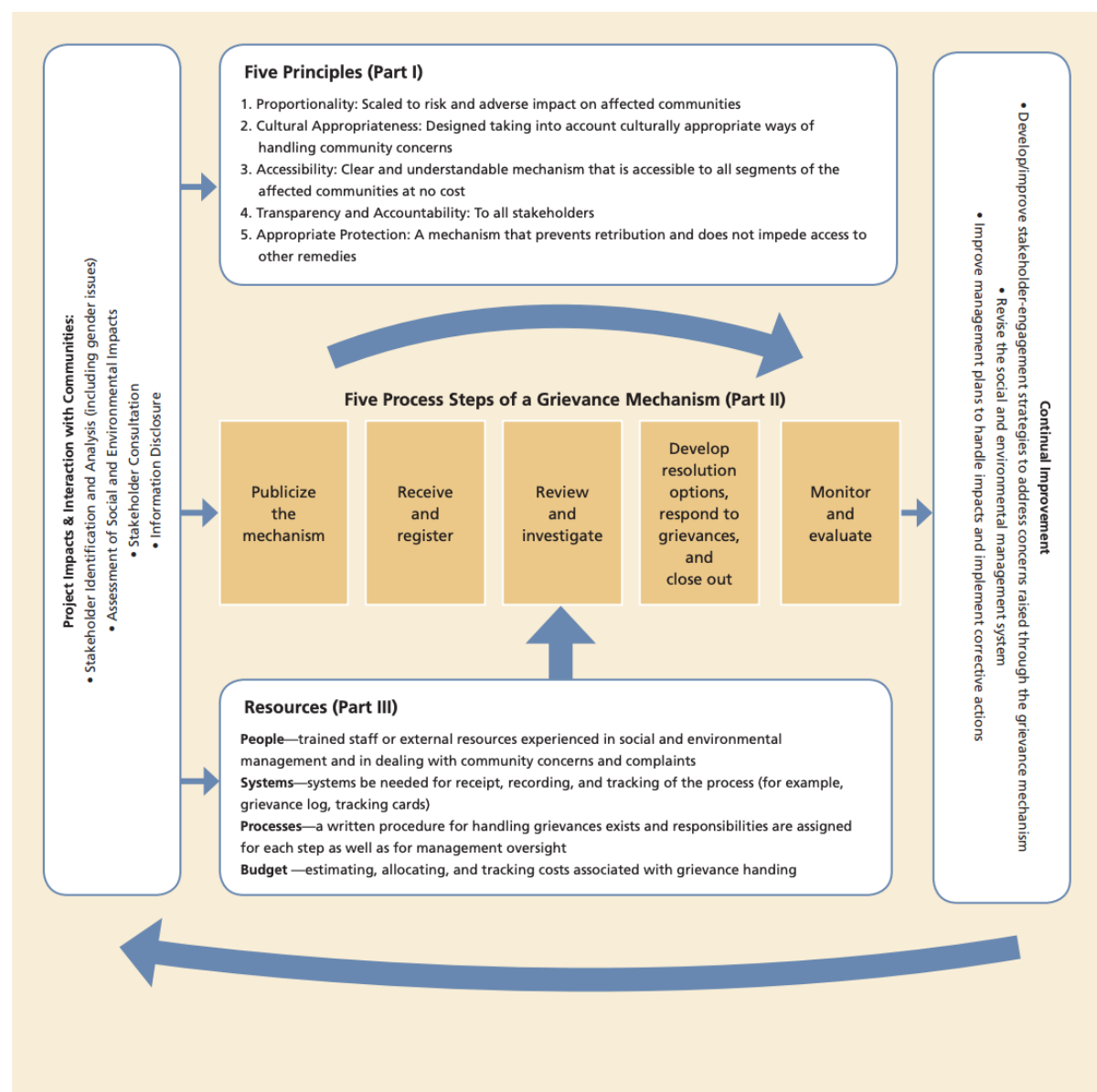
The Accredited Entity is expected to confirm that FPIC is carried out in its entirety, that project risks and impacts are appropriately disclosed in accordance with the GCF Information Disclosure Policy and Intellectual Property Policy, and that affected communities are consulted during the design and implementation of activities. It is also expected to confirm that appropriate grievance and redress mechanisms are established and function.

What framework should indigenous peoples' grievances have?

1. The language will be respected, and the many methods in which that the IPs may like to communicate their concerns must be considered.
2. The mechanism must take national laws, international commitments, and standards, as well as their conventional legal systems, into account.
3. IPs should be allowed to consult with independent indigenous experts or consultants.
4. Allows for anonymous complaints & consistently upholds the confidentiality of all parties: If they concerned about threats or retaliation, the identity will be kept secret.
5. Alternatively, a non-governmental organization (NGO) or an authorized representative may file the complaint on their behalf.
6. Prevents retribution against all parties: In any event, precautions must be taken to avoid revenge.
7. IPs will have the right to have your document translated or interpreted.
8. Maintains a log of actions taken: All information pertaining to the grievance will be recorded in writing and submitted with the GCF Independent Redress Mechanism.
9. The processes must be made public, together with information on how to file grievances, how the process will be transparent, and how judgments will be made.
10. Additionally, a time restriction will be established within which you are anticipated to get a response. Non-exclusive.
11. Allows for cumulative learning to manage continual development and change.⁴⁹⁵⁰

⁴⁹ <https://www.tebtebbba.org/index.php/clua-articles/making-the-gcp-ip-policy-work-for-ips-dealing-with-grievance>

⁵⁰ <https://www.accountabilitycounsel.org/wp-content/uploads/2017/07/IFCGrievanceMechanisms.pdf>



Source: <https://www.accountabilitycounsel.org/wp-content/uploads/2017/07/IFCGrievanceMechanisms.pdf>

Figure 2: Basic Design Elements of a Project-Level Grievance Redress Mechanism

Receiving and Recording of Grievances

As part of the GRM, stakeholders' or particularly IP's concerns may be expressed orally or in writing (using the form provided hereunder). All concerns addressed through any of these channels shall be acknowledged and documented by the IP's representative, member of the NGO, or the IP experts or consultants in the manner in which they are expressed.⁵¹

⁵¹ https://www.adb.org/sites/default/files/project-documents/49086/49086-001-cia-en_2.pdf



GRIEVANCE REGISTRATION	
Case No.:	Date :
Name :	
Department/ Contractor Name	
Phone no.	
Details of grievance:	
Name of person recording grievances (if applicable):	
Designation of recording person (if applicable):	
Proposed date of response to grievance:	
Signature of recording person (if applicable)	Signature of complainant
GRIEVANCE REDRESSAL RESPONSE	
Date of redresses:	
Decision of GO (give full details):	

Source: https://www.adb.org/sites/default/files/project-documents/49086/49086-001-eia-en_2.pdf

Figure 3: Sample of a Grievance Form



9.7 NCIP FPIC/MOA/Certification Precondition

Overview. When the proposed infrastructure project will be unavoidably located in an ancestral domain, the Implementing Office, with the assistance of the Safeguards Group, shall include in the Environmental Work Program, during the Project Identification Phase, the requirements of NCIP pursuant to RA 8371 Indigenous Peoples Rights Act of 1997 and its implementing rules and regulations. These are the FPIC, MOA, and Certification Precondition. Certification Precondition (CP) refers to the Certificate issued by the NCIP, signed by the Chairperson, attesting to the grant of FPIC by the concerned ICCs/IPs after appropriate compliance with the requirements provided for in this Guidelines.

Section 7 of RA 8371 pertaining to rights in the ancestral domains, as follows:

- a. Rights of Ownership
- b. Right to Develop Lands and Natural Resources
- c. Right to Stay in the Territories
- d. Right in Case of Displacement.
- e. Right to Regulate Entry of Migrants.
- f. Right to Safe and Clean Air and Water.
- g. Right to Claim Parts of Reservations.
- h. Right to Resolve Conflict

Among the implementing rules and regulations is the NCIP Administrative Order (AO) No. 3 Series of 2012 or the Revised on Free and Prior Informed Consent (FPIC) and Related Processes of 2012. NCIP AO 2012-03 has seven objectives and Number 1 is to "ensure genuine exercise by Indigenous Cultural Communities/Indigenous Peoples (ICCs/IPs) of their right to Free and Prior Informed Consent (FPIC), whenever applicable".

Documentary Requirements. The Implementing Office shall coordinate with NCIP Regional through an official letter and courtesy visit to inform the office and consult on the operational requirements.

Process. The activities are outlined as follows:

1. **Determination of the lead NCIP Regional Office.** The NCIP Regional Director shall determine if the proposed project is solely under the jurisdiction of the region, if there is another, the matter will be referred to the Ancestral Domain Office which will decide on which region will lead. (Section 6)
2. **Formation of a Field-Based Investigation (FBI) Team** through a memorandum of the NCIP Regional Director (Section 8). Field-Based Investigation (FBI). It refers to the ground investigation undertaken to determine whether the plan, program, project or activity overlaps with, or affects, an ancestral domain, the extent of the affected area, and the ICCs/IPs whose FPIC is to be obtained.
3. Pre-FBI Conference; Matters to be Taken (**Section 10**)
 - a. Orientation on the requirements of the FBI process.



- b. The identity and other basic information about the applicant.
 - c. Detailed project profile.
 - d. Work and Financial Plan; and
 - e. Other important matters that may be agreed upon.
4. Agreement on the Work and Financial Plan (WFP) for FBI/FPIC. (Section 12)
 5. Commencement and Conduct of the FBI (Section 13)
 6. FBI Reporting (Section 14)
 7. Formation of FPIC Team by the NCIP Regional Director (Section 16)
 8. Conduct of Pre-FPIC Conference (Section 21)
 9. Conduct of two community assemblies for the Consent with Drafting of MOA (Section 22)
 10. Posting of Bond (Section 23)
 11. FPIC Team Submission of Report to the NCIP Regional Director (Section 28)
 12. The Regional Review Team (RRT) review the FPIC Report and MOA (Section 28)
 13. Legal Review of the MOA (Section 35)
 14. Issuance of Certification Precondition

9.8 NCIP Certificate of Non-Overlap

Overview. During the project definition phase or prior to the conduct of Feasibility Study, the Implementing Office shall obtain a Certificate of Non-overlap (CNO) from the NCIP Regional Director when a proposed project is outside but near an Ancestral Domain, or as deemed important as supporting document in for ECC or CNC applications.

Documentary Requirement. The documents are the request letter and clear location map of the proposed project. The request letter shall contain an undertaking for the conduct of FPIC should it be discovered later that there is, in fact, an overlap with an AD.

Process.

1. The Implementing Office sends the request letter to NCIP Regional Director
2. NCIP Regional Director acts on the request and sends a reply

The CNO will have a concurrence of the concerned NCIP Commissioner. Under Section 15 of NCIPAO 2021-03 requires applicant to execute an undertaking for the conduct of FPIC should it be discovered later that there is, in fact, an overlap with an AD, provided further, that special attention shall be given to ICCs/IPs who are shifting cultivators or traditionally nomadic so as not to prejudice their rights as such.



9.9 Indigenous People Affected by DPWH Project

Indigenous peoples affected by the project demand special consideration due to their inherent vulnerability and unique relationship with the physical environment. The DPWH should understand that Indigenous Peoples' identities and traditions are intrinsically related to their physical environment and natural resources. This exposes IPs to certain dangers and greater levels of impact that the dominant groups in Philippine society do not encounter when confronted with infrastructure development projects. Thus, the purpose of this section is to ensure that DPWH-implemented initiatives do not cause more harm to IPs or leave them worse than they had before the projects.⁵²

9.9.1 Coverage of the Indigenous Peoples' Policy

This policy applies to all Indigenous Peoples (IPs) and Indigenous Cultural Communities (ICCs), regardless of whether they live outside or within an officially declared ancestral domain, or in areas belonging to IPs covered by a Certificate of Ancestral Domain Title (CADT) or Certificate of Ancestral Title (CAT) (CALT). Additionally, it encompasses territories that are the subject of pending applications to be proclaimed an ancestral domain.

It is applicable to projects that undergo three (3) distinct categories of procedures:

1. Those initiatives that are launched and requested proactively by IPs/ICCs.
2. Infrastructure projects requiring Free and Prior Informed Consent; and
3. Non-infrastructure projects requiring Free and Prior Informed Consent (FPIC)

It addresses six (6) distinct scenarios in which Indigenous Peoples may be impacted by civil works and associated activities. These are the following instances:

1. When land is taken involuntarily (including structures, improvements, crops, trees, and perennials) inside a legally proclaimed ancestral domain or an area for which an application to declare an ancestral domain is pending.
2. When the involuntary seizing of land (including structures, improvements, crops, trees, and perennials) inside a legally declared ancestral domain or an area subject to a pending application to be proclaimed results in Indigenous Peoples' relocation and resettlement.
3. When Indigenous Peoples are relocated beyond their ancestral domain because of their displacement.
4. When land is acquired outside an ancestral domain or an area designated as such through a pending application, Indigenous Peoples, whether as individuals, families, or communities, are among those relocated.

⁵² <https://www.dpwh.gov.ph/dpwh>



5. When land purchase happens outside an ancestral domain or an area designated as such through a pending application and Indigenous Peoples are among those affected, but no IPs will be relocated elsewhere; and
6. As a result of the utilization of natural resources from ancestral domains.

Procedures are fragmented into 3 categories:

Given the public character and utility of infrastructure projects, the DPWH's policy is for IPs to propose and initiate infrastructure projects according to their own. There is certainly no necessity for a Free and Prior Informed Consent for initiatives that the IPs independently solicit and begin inside or beyond their ancestral domain without coercion (FPIC). Chapter III of this LARRIPP, or the Policy on Eligibility, Compensation, and Other Entitlements, remains applicable even in voluntary solicitation or initiation situations. In general, IPAPs are not necessary for initiatives that are proposed or initiated unilaterally by IPs.

The project proponent shall demonstrate that the projects were launched or requested by Indigenous Peoples. A representative of the NCIP should be invited and present to attest that the consultation was indeed free of coercion or manipulation, gender and intergenerationally inclusive, and conducted with appropriate disclosure of information and in accordance with the social and cultural values of the affected IP communities and their contexts. Consensual initiation and solicitation are subject to validation by the National Commission on Indigenous Peoples in accordance with the IPRA and the NCIP Administrative Order No. 1 or the 2012 Guidelines on Free and Prior Informed Consent (see Appendix A).

In the case that impacted Indigenous Peoples need not consent under their ancestral domain, the procedure outlined in Part V, Section 27c of NCIP Administrative Order No. 1 or the 2006 Guidelines on Free and Prior Informed Consent shall apply.

If ICC/IPs reside outside of ancestral domains, Section D of this Chapter shall apply.



Table 9-1: Location of IPs/ICCs and Requirements for FPIC and IPAP

	Location		Requirement for FPIC	Requirement for IPAP
Voluntarily initiated or solicited by IPs;	Inside Ancestral Domain		None	None
	Outside Domain	Ancestral	None	None
Projects that are not voluntarily initiated or solicited by IPs	Inside Domain	Ancestral	Yes	MOA=IPAP
	Outside Domain	Ancestral	None except for a special case discussed in Section 6.5.4 of this chapter	IPAP required

9.9.2 Acquisition of Land within Ancestral Domain

If land (including structures, improvements, crops, trees, and perennials) is to be acquired within an ancestral domain, the DPWH and its staff must follow the 2012 FPIC Guidelines or the terms of any agreement negotiated between the DPWH and the NCIP. The Social and Environmental Management Systems (SEMS) Manual contains the specifics of the 2012 FPIC Guidelines.

Free and Prior Informed Consent (FPIC) must be obtained in accordance with the social and cultural values of the affected Indigenous Peoples' Communities, considering the priority of the ICC/IPs' clothing, traditions, customs, and socio-political institutions. External manipulation, meddling, and pressure must be avoided, and the process must prioritize the interests of Indigenous women, adolescents, and children. Consent is obtained only after a thorough disclosure of the project's purpose, scope, benefits, potential adverse effects, and measures to avoid, reduce, minimize, and mitigate these effects in a language and manner that is culturally appropriate and understandable to the affected Indigenous Peoples' Communities.

As required by the 2012 FPIC Guidelines, the DPWH or project proponent should produce a presentation of the project for explanation to the affected IP/ICCs during the Consultative Community Assembly (CCA) or the First Meeting. Whichever is most pertinent. The project proponent shall present the project's objectives and scope, its operation, including a timeframe if available, the project's costs and benefits to the ICC/IP and their ancestral domains, its relationship to the Ancestral Domain Sustainable Development and Protection Plan (ADSDPP), if available, and the project's perceived disadvantages or adverse effects on the ICC/IP, as well as the mitigation and mitigation measures proposed by the project proponent.



Additionally, during the Consultative Community Assembly (CCA) or the First Meeting, the proponent will explain the legal framework governing the taking of private or communal property for public use, the various modes of acquisition, the policy on eligibility, compensation, and other entitlements, as well as any other applicable laws and policies. The project proponent shall explain to NCIP representatives the proposed grievance processes to be followed as well as the institutional arrangement for monitoring and evaluation.

9.9.3 Land Acquisition without Resettlement

The project may involve the acquisition of land and/or the structures, improvement, crops, trees, and perennials on it. The acquisition must ensure that non-replicable cultural property will not be damaged in the process in accordance with Chapter VI, Section 33 of the IPRA. All reasonable efforts should be done to ensure that road sections and linked activities projects, will not pass through religious and cultural properties of IPs, e.g., burial and the like that these be preserved, respected, and protected in situ. If passage through, and hence damage to and/or partial or total relocation of religious and cultural properties is unavoidable, this should be presented to the ICC/IPs in the Consultative Community Assembly (CCA) or First Meeting whichever is applicable and obtained the Free and Prior Informed Consent of the affected ICC/IPs. If consent is obtained, modes of compensation will be guided by Chapter III of the LARRIPP. The IPs may opt to receive the entitlements laid out in Chapter III in culturally appropriate for m consistent with their customary law. When completion of the project would involve significant restrictions of access to religious and cultural sites and to traditional hunting, gathering grounds or natural resources that the IPs use, these restriction plus the measures to minimize them will be disclosed by the project proponent to the affected ICC/IPs and include as part of the IPAP/MOA. Temporary restrictions on indigenous peoples' access to natural resources and religious and cultural sites during project implementation plus the measures to minimize them shall be disclosed by the proponent. Measures to mitigate these temporary restrictions will also be contained in the IPAP/MOA.

Compensation for acquired lands, affected structures, and other modifications, as well as crops, trees, and perennials within the ancestral domain that do not require the removal and resettlement of ICC/IPs, shall be governed by Chapters II (Legal Framework) and III (Policy on Eligibility, Compensation, and Other Entitlements). The ICC/IPS may elect to obtain compensation in a way that is culturally appropriate and in harmony with their customary law. Apart from the benefits stipulated in Chapter III, the benefits to be enjoyed by the host ICC/IPs will be clearly stated in the Memorandum of Agreement (MOA) that will be executed between and among the ICC/IPs, the project proponent, and other related parties in accordance with Sections 43 to 46 of the 2006 FPIC Guidelines.

If the impact on particular IPs is extreme (including property that is not used for residential purposes), and subject to the affected IPS's Free and Prior Informed Consent, land swapping shall be investigated first. Conditions relating to land swapping and other sorts of protection or entitlements for seriously affected individuals will apply, as detailed in Chapter III of this LARRIPP.



The project proponent is bound by the Memorandum of Agreement (MOA) it makes with the impacted ICC/IPs, particularly on the method in which compensation and benefits are provided to affected individuals/families and the general community. Similarly, the project proponent, in collaboration with the NCIP and the affected ICC/IPs, will incorporate measures into the MOA to ensure gender equity, participation, transparency, and accountability in the handling, distribution, safekeeping, and use of funds, and also in the overall implementation of the MOA.

The MOA, as amended, shall serve as the Indigenous Peoples' Action Plan (IPAP).

9.9.4 Land Acquisition in Relation with Displacement and Resettlement

Wherever possible, policy should preclude involuntary resettlement and relocation of ICC/IPs. If relocation is considered necessary, the project's impacted households will be relocated as close as feasible to their ancestral domain and original land in order to avoid interfering with the practice of traditional resource use rights and livelihood activities.

The DPWH and its agents shall adhere to the 2012 Free, Prior, and Informed (FPIC) Guidelines and any requirements of any agreement established between the DPWH and the NCIP when presenting the project, its adverse effects, and potential resettlement sites. Indigenous Peoples' Communities will be contacted over the relocation site in accordance with their customary law. The project proponent, in collaboration with relevant government agencies, shall ensure that the resettlement site does have equivalent productive potential (or is developed to always have equivalent productive potential) and spatial advantages, such as equal access to resources, public and private services, and protection. Unless this is possible, the Resettlement Action Plan (RAP) should contain steps to address the lack of access to natural resources, basic services, cultural and religious sites.

Chapters II and III of the LARRIPP will govern compensation for persons who will be relocated and resettled. Other than those legally required, benefits agreed upon between the ICC/IPs and the proponent shall be included in the Memorandum of Agreement (MOA) in accordance with Sections 43 to 46 of the 2012 FPIC Guidelines. The impacted ICCs/IPs may choose to obtain compensation and support in a manner consistent with their customary law.

The proponent of the project is bound by the Memorandum of Agreement (MOA) it enters into with the affected ICC/IPs, particularly addressing the way of relocation and the allocation of compensation and benefits to affected persons/families and the community at large. Similarly, the project proponent, in collaboration with the NCIP and the Affected ICC/IPs, should include a clause in the MOA ensuring that gender equity, participation, transparency, and accountability are adhered to in the handling, distribution, safekeeping, and use of funds, as well as in the overall implementation of the MOA.

The Memorandum of Agreement, as amended, shall serve as the Indigenous Peoples' Action Plan (IPAP)



In the event of exceptional case when the resettlement location is located beyond the affected ancestral area, the 2012 FPIC Guidelines or any agreement established between the DPWH and the NCIP will also apply. The IPs will be consulted on the resettlement site selection in accordance with their customary law. The project proponent, in collaboration with relevant government agencies, shall ensure that the resettlement site has equivalent productive potential (or is developed to have equivalent productive potential) and spatial advantages, such as equal access to resources and to public and private-sector services and protection. Unless this is possible, the Resettlement Action Plan (RAP) should contain steps to address the lack of access to natural resources, basic services, cultural and religious sites. Preparation efforts must be done for the receiving community.

If the receiving site is an ancestral domain or an area for which a CADT application is pending, the receiving Indigenous Peoples' community's Free and Prior Informed Consent will be requested in accordance with the 2012 Free and Prior Informed Consent (FPIC) Guidelines.

The project proponent is bound by the Memorandum of Agreement (MOA) it engages into with the impacted ICC/IPs, particularly in terms of relocation and the distribution of compensation and benefits to affected individuals/families and the community at general. Similarly, the project proponent, in collaboration with the NCIP and the affected ICC/IPs, should incorporate measures into the MOA that ensure gender equity, participation, transparency, and accountability in the handling, distribution, safekeeping, and use of funds, as well as in the overall implementation of the MOA. The Memorandum of Agreement, as amended, functioned as the Indigenous Peoples' Action Plan (IPAP)

In the extremely rare event that some IPs are resettled outside their ancestral domain, either by choice or necessity, while their kindred remain or are resettled within the ancestral domain, depending on the number of IPs resettled, either an IPAP or a special section on IPs in the Resettlement Action Plan (RAP) will be prepared for those resettled outside the ancestral domain. This is in addition to the MOA, which serves as an IPAP for individuals who remain inside the ancestral domain. IP to be resettled outside their ancestral domain will be relocated to specified resettlement sites.

9.9.5 Effects of Land Acquisition on IPs/ICCs Outside the Ancestral Domains

It is possible that during the implementation of infrastructure projects, land would be removed outside of an officially declared ancestral domain or an area with a pending application to be proclaimed such, but IPs will still be impacted.

Regardless of the impact, the project proponent will convene a separate meeting with the IPs to secure broad support for the project through methods that are sensitive to the social and cultural values of the affected Indigenous Peoples' Communities and that recognize the primacy of the ICC/IPs' customs, traditions, practices, and socio-political structures. The process must be free of external manipulation, interference, and coercion, and must prioritize the concerns of Indigenous women, youth, and children. There must be complete disclosure of the project's intent, scope, benefits, potential adverse impacts, and measures to avoid, reduce, minimize, and mitigate these effects in a language and manner that is culturally appropriate and understandable to the affected Indigenous Peoples' Communities.



Additionally, the proponent should notify the affected ICC/IPs of this LARRIPP. If required, separate consultations with IP women and children will be undertaken with the ICC.

A representative of the NCIP would be invited to attend and should participate.

9.9.6 Indigenous Peoples that are to be Resettled

For the duration of IP/ICC meeting, the project proponent shall disclose the requirement of moving the entire or a significant portion of the IP community or individual IP families. If the IP community is indeed a migrant in the area and must be relocated, the project proponent might lobby for their resettlement to their place of origin. If this option is accepted, transportation allowances or help will be provided, as well as compensation and other sorts of entitlements for persons who will be relocated, as detailed in Chapter III of this LARRIPP. The proponent of the project, in collaboration with the NCIP, will prepare the hosting community. If the location of the affected IPs' origin and re-settlement was an ancestral domain or an area with a current application to be proclaimed an ancestral domain, the receiving ICC/IPs' Free and Prior Informed Consent (FPIC) would be acquired first, in accordance with the 2012 FPIC Guidelines.

If the IPs/ICCs renounce this option, the proponent, in collaboration with the appropriate government authorities, will fully disclose the resettlement site, taking into account their possible preference to migrate and reside in a separate and distinct neighborhood in order to retain kinship and identity. The relocated IP community shall be compensated and provided the same rights and privileges as non-IPs, as specified in this LARRIPP. The IP community may choose to obtain compensation and benefits in a manner commensurate with their cultural traditions and customary law. The project's proponent will prepare the community that will host or receive the project.

The proponent, in collaboration with government agencies, will ensure that by relocating IPs/ICCs (and non-IPs as well), the latter will preserve their current level of well-being. To do this, the proponent will collaborate with the NCIP, other government agencies, and the affected IP community to develop an Indigenous Peoples' Actions Plan (IPAP) that will include protections for gender equity, participation, transparency, and accountability.

If resettlement necessitates the resettlement of a few IP families but not others, and if the affected IPs willingness, the project proponent will explore resettlement options within the immediate vicinity of the impact area in order to avoid destroying or diminishing kinship and other social relationships, limiting their access to services, disrupting livelihoods, and depriving them of any traditional resource use rights. Resettled IP families shall be compensated and entitled to the same benefits as non-IP families, as specified in this LARRIPP. The proponent of the project will prepare an IPAP for individuals who will be relocated and another for those who will remain.



9.9.7 IPs that are not Resettled

IPs affected but do not require resettlement will be paid and enjoy the same types and levels of services and rights as non-IPs are similarly entitled. According to their own customary law and culture, the minimally affected IPs may choose to be reimbursed or aided in their own way. Proponents will either write a detailed IP PAF plan or add a specific section in the abridged RAP for IP PAFs depending on the amount of IP PAFs.

9.9.8 Resettled on Public Domain Land by Resettled IPs

People who have been driven from their ancestral territories by the government or forced out of their homes due to conflict, natural disaster or forcible disposal of their property make up a unique category of IPs. Section 7d, IPRA states that these IPs have the right to secure tenure over the property to which they have relocated and should not be considered migrants. If these IPs are affected by the projects, the 2012 Free and Prior Informed Consent Guidelines apply. IPAP is the Memorandum of Agreement (MOA) between the project proponent and all of the impacted IPs.

9.9.9 Extraction of Natural Resources from the Ancestral Domain and their Use

All of the LARRIPP's conditions are binding on the project proponent and the DPWH. Natural resource exploitation by DPWH's contractors or agents inside ancestral areas must adhere to the FPIC Guidelines of 2012, particularly Section 24 and 48 on Small Scale Quarrying. A contractor's employees and subcontractors or agents can be held liable for their conduct in the same way that a contractor is held liable for its own.

Under Section 24:

The FPIC process under this Section requires negotiation between the community, represented by its Council of Elders/Leaders, and the applicant, facilitated by the FPIC Team. There shall be two (2) separate meetings with the elders/leaders which are herein referred to as the First meeting and the Decision meeting. In the First meeting, the applicant will be given sufficient time to present and clarify its proposal. The presentation must include the operation plan, the scope and extent of the activity, the cost and benefits to the ICC/IP and their ancestral domains, perceived disadvantages or adverse effects to the community, and measures adopted by the applicant to avoid or mitigate these. In said meeting, the ICCs/IPs shall prepare a schedule for their decision-making/consensus-building which must start not less than ten (10) days from the first meeting and completed not more than Thirty (30) days thereafter. The First meeting shall be followed by the consensus-building period by and among the council of elders/leaders. They will also use this period to consult with their constituency in accordance with their customary mechanisms. After they are able to arrive at a consensus within the time frame they decided, they shall inform the FPIC Team of such consensus. If the decision/consensus is favorable, the Team shall forthwith convene the Decision meeting, with notice to the concerned parties. During this meeting, the council of elders/leaders will formally proclaim their decision and the parties



shall proceed to negotiate and finalize the terms and conditions of the MOA and thereafter consummate the same. If the consensus is against the project, the leaders/elders shall issue a resolution of non-consent, however, if it is favorable, the Regional Director shall within three (3) days, from receipt of the resolution, prepare and sign the CP and transmit the same, including the FPIC Report, to the concerned commissioner for concurrence, copy furnished ADO. Once concurred, the same shall be endorsed to the Chairperson for confirmation.

Under Section 48:

The CP for small-scale quarries, whose permits are issued by Local Government Units (LGUs) shall be issued by the concerned Regional Director with the concurrence of the concerned Regional Ethnographic Commissioner and affirmation by the NCIP Chairman. A copy of the CP shall be furnished to ADO, the concerned Provincial Officer or CSC Head, as the case may be.

However, cutting and filling for road building does not constitute extraction of natural resources.

Table 9-2: Summary of the Impact and Accompanying Safeguards Instrument

Location of Affected IPs	Impact	Relocation Site and Magnitude of Affected Families to be relocated	Guiding Framework	Safeguard Instrument
Inside Ancestral Domain	Without Resettlement	Not Applicable (NA)	FPIC Guidelines of 2006 and/or possible MOU between the DPWH and the NCIP For compensation and entitlements, Chapter II and III of the LARRP	MOA = IPAP
	With Resettlement	Inside	FPIC Guidelines of 2006 and/or possible MOU between the DPWH and NCIP For compensation and entitlements, Chapter II and III of the LARRP	MOA=IPAP
		Outside Ancestral Domain	FPIC Guidelines of 2006 and/or possible MOU between the DPWH and NCIP For compensation and entitlements, Chapter II and III of the LARRP	MOA=IPAP
		Mixed: Some IPs resettled outside ancestral domain; others remain inside	FPIC Guidelines of 2006 and/or possible MOU between the DPWH and the NCIP For compensation and entitlements, Chapter II and III of the LARRP	For those remaining inside the Ancestral Domain: MOA=IPAP; For those resettled outside the Ancestral Domain: Depending on magnitude, either a stand-alone IPAP or a special chapter in the RAP



Location of Affected IPs	Impact	Relocation Site and Magnitude of Affected Families to be relocated	Guiding Framework	IP Instrument
Outside Ancestral Domain	With Resettlement	Whole Community or a Large Portion of the Community	LARRIPP Governed by possible MOA between the DPWH and NCIP Explore option to resettle in their place of origin. If the identified receiving area were an ancestral domain, Free and Prior Informed Consent should be obtained from the hosting IP community. FPIC Guidelines of 2006 and/or possible MOA between the DPWH and NCIP shall apply. For compensation and entitlements, Chapter II and III of the LARRIPP	IPAP
		A Few Families but majority of the IP Community remains.	Explore option to resettle in the immediate vicinity of the IP community For compensation and entitlements, Chapter II and III of the LARRIPP	IPAP to cover both PAFs to be resettled and the IP community that remains.
	Without Resettlement	Not Applicable	For compensation and entitlements, Chapter II and III of the LARRIPP	Depending on the number of IP PAFs, either a stand-alone IPAP will be drafted or a special IP Section in the Abbreviated RAP.
Outside of Ancestral Domain IPs who have been resettled in lands of the public domain	With or Without Resettlement	Whole Community or a Portion	FPIC Guidelines of 2006 For compensation and entitlements, Chapter II and III of the LARRIPP	MOA=IPAP

For NON-IPS

All PAPs must be informed of the following during the campaign:

1. First and foremost, the road project that initiated the Safeguard Policy.

What's the significance of this? Is it going to help anyone in the long run? To what extent will it help those who have been harmed by it;

As outlined in RA10752, each PAP is entitled to proper compensation based on the current market value of the affected land. The BIR zonal valuation and the fair market value may be considerably different.

In order for the PAPs to surrender their property to the DPWH, the following requirements must be satisfied:

1. Land redistribution or donations do not affect the donor's livelihood;
2. The land to be donated is titled, un-rented, has no encumbrances, or is occupied by informal settlers;
3. The voluntary aspect of land redistribution or donation;
4. The land to be donated is titled, un-rented;
5. The voluntary aspect of land redistribution or donation. The document's inclusion in the RAP will serve as the foundation for its acceptance. According to BIR regulations, the arrears on donated plots must either be paid or waived. The LGU will have to pay the taxes if a waiver is not attainable.

Section 7 of RA 10752 provides that if a property owner refuses or fails to accept the price offer for negotiated sale or fails and/or refuses to submit the documents necessary for payment, or if negotiations



are not feasible, the IA shall initiate expropriation proceedings as stipulated in Section 7 of the IRR of the law. After determining the market value, the IA will immediately require the support of the Land Bank, DBP, or an independent appraiser to do so.

1. Classification of land use
2. Value stated by the PAPs, the current selling price of similar properties in the area, disturbances, tax declaration, and BIR zonal valuation are some of the factors to consider.
3. A compensation payment will be offered based on Section 6 of the IRR of RA10752.
4. IA may file an expropriation proceeding in court if the PAPs refuse to accept the given price after 30 days, as specified in Section 7 of the IRR of the RA 10752.
5. The ultimate compensation is negotiated out through talks with the affected property owners (PAPs) under RA 10752. If the PAPs do not accept these conditions, their properties will be expropriated; (Section 6 IRR of RA 10752)
6. One hundred percent (100%) compensation shall be paid to a Philippine Anti-Prostitution Party (PAP) whose land is being expropriated, and that compensation shall be determined by the court within sixty (60) days after filing of an expropriation case, in accordance with the current relevant BIR valuation of the land. It will be up to DPWH to rectify the situation on the shortfall between what it has previously paid to the PAP and what it has been ordered to make fair. DPWH will put the whole BIR valuation into an escrow account during the interim.

The PAPs will be informed about the various avenues for lodging complaints and grievances, as well as the processes for doing so. There will be a definitive explanation to the PAPs about how any PAP complaints about the LARRIPP or any other component of the project will be resolved through talks and the following procedures:

1. First, the PAPs will appeal to the Resettlement Implementation Committee (RIC) to express their concerns.
2. A complaint can be forwarded to the DPWH Regional Office if it is not handled properly within 15 days or the PAP does not receive a response from the RIC (RO).
3. PAP can file a legal complaint in any court of law if the matter is not addressed within 15 days or the PAP receives no response from the DPWH RO.

Community meetings and brochures must be used to disseminate the information campaign, that will be led by the PMO with the assistance of ESSD and the regional and district engineering offices.

9.9.10 Meetings of the Community

1. To ensure that all PAPs or their authorized representatives may participate, community meetings must be conducted in sufficient numbers and at the proper venue and time. DPWH officials will explain the purpose of the meeting and provide the material listed above during the sessions itself.
2. PAPs will have the freedom to seek clarification and to provide suggestions for ways to make the compensation scheme easier to administer.



3. DPWH can arrange for PAPs to be transported to and from the meeting location if necessary.
4. DPWH will keep track of the attendees and take down notes on the conversations at each meeting.

9.9.11 Brochures

1. Each PAP will get a booklet from the DEOs that includes a statement of purpose, project specifics, and all of the previously specified material.
2. The leaflet will be delivered at the community gatherings with additional copies of the leaflet.
3. Larger posters of it will be shown in municipal, city and barangay halls.

PAPs, including women and the elderly, will be consulted and encouraged to participate the consultation meeting, where the repercussions of the Resettlement Action Plan on their culture will be explored.

Workshops on the information campaign will be held at the DPWH Central Office in Manila or at DPWH Regional Offices as necessary to ensure that the DPWH District Engineering Offices fully grasp the goal and methods of the information campaign.

Participation in these events will be primarily confined to DEO representatives who will be directly impacted by the project component.

The Internal Monitoring Agent (IMA) will be ESSD, while the External Monitoring Agent (EMA), who will be employed by DPWH, will do the external monitoring. To the ROs and/or DEOs and to all parties involved, including the PAPs, the IMA and EMA reports shall be made accessible.

9.9.12 Ancestral Domain IPs /ICCS

Affected IP communities should resolve conflicts in accordance with their customary law and customary dispute resolution process and mechanism, in the presence of the relevant NCIP office staff, and if so invited, project-related staff and other stakeholders, e.g., the barangay and/or the municipality's formal leadership, in accordance with their own customary law.

To resolve intercommunity disputes, each community will use its customary or agreed-upon Dispute Resolution Mechanism (DRM). The NCIP will be called upon whenever an outside facilitator, mediator, or arbitrator is needed or requested by the PMO and project implementing and monitoring units in the field. This will be documented by a RAP focus person at a District Engineering Office with the aid of regional and central office equivalents. This is in addition to the documentation that the IP community/ies and the NCIP have already done.

IP communities have the option of lodging objections and grievances with the Municipal Resettlement Implementation Committee (MRIC) and the Multi-Sectoral Monitoring Team (MSMT) if no satisfactory outcome or an impasse develops (MMT). no substitute or replacement for FPIC's grievance procedure is provided here. their choosing, the IPs may avail of the grievance procedure and mechanisms spelled out in Section 47 of the Free and Prior Informed Consent (FPIC) Guidelines of 2012 for complaints regarding the MOA.



9.9.13 Institutions to Investigate

9.9.13.1 Unified Project Management Office (UPMO) of the DPWH

Is in charge of implementing the project as a whole. The project's management and supervision will be handled by the Unified Project Management Office (UPMO) in conjunction with the appropriate agencies. RAP money and costs must be accurately accounted for in order for the RAP to be implemented on time. Per D.O. # 58, issued May 21, 2004, ESSD (previously EIAPO) will help the UPMO in the implementation of the RAP by providing technical direction and support.

9.9.13.2 Environmental and Social Services Division (ESSD)

For the IPAP, ESSD shall provide technical assistance and support, and it will be responsible for the following resettlement activities:

- a) The IPAP's overall planning and preparation;
- b) IPAP budget plans must be submitted to the DPWH central office for approval and allocation of needed resources;
- c) The District Engineering Offices and Regional Offices must be guided in their tasks, such as verification of PAFs and final inventory of affected assets, in accordance with departmental resettlement policies; internal and/or external monitoring of IPAP implementation may uncover issues that need to be corrected or supplemented.

For example, in collaboration with the DPWH Regional Office, follow-up on compensation claims of PAFs; monitor actual compensation fees paid to PAFs; and prepare periodic supervision and monitoring reports on IPAP implementation for submission to UPMO and the Bank in close collaboration with its local counterpart.

9.9.13.3 The DPWH's District Engineering Offices

It is the Technical Coordinator's responsibility to oversee the operation around, verification, and validation of PAF assets; undertake inventory and catalog reports for the properties that will be affected; approve disbursement vouchers and payments to PAF; submit reports on disbursements and payments to PAFs to the Regional Office, UPMO, and ESSD; and submit monthly progress reports to ESSD, the Regional Office, UPMO, and ESSD. It is also expected that the DEO would become an active participant in the Resettlement Implementation Committee (RIC).

9.9.13.4 DPWH's Regional Offices

IPAP would be implemented in accordance with plan in line with ESSD's Regional Office, which will serve as the liaison between the parties. Monitor the IPAP implementation and money disbursement; produce monthly progress reports to ESSD; and monitor payments to PAFs are some of its specific activities. Additionally, the RO will stay on top of any complaints from the PAFs that have been lodged at its office.



9.9.13.5 *Indigenous Peoples' National Commission (NCIP)*

For ICCs and IPs, the NCIP is the major government agency for requesting government assistance. Power to issue certificates of ancestral land/domain titles (CALTs/CADTs) is vested in NCIP by the IPRA. Any private individual, corporate entity, or government agency, corporation, or subdivision thereof may be granted permission, lease, grant or other similar authority for the disposition, utilization and management of any part or portion of the ancestral domain, taking into account the consensus approval of the ICCs/IPs concerned. (Section 44e)

9.9.13.6 *The Committee for Resettlement Implementation (RIC)*

This would include officials from the NCIP provincial and/or regional office, the City/Municipality, the affected barangays, and PAFs/PAPs with distinct representation for IP/ICC communities affected by the project.

- I. *The processes of the NCIP will be implemented in the selection of these ICC/IP officials.*
 - a) Assist DPWH personnel who are engaged on LARRIPP operations, such as validating the list of AFs,
 - b) Validating the assets of PAFs that will be affected by the project (using a compensation form), and
 - c) Monitor and implement the plan;
- II. *Process of determining the Affected Persons are IPs or members of the IPs or ICCs*
 - a) To engage the DPWH and LARRIPP personnel with public participation and consultation initiatives and information campaigns.
 - b) To facilitate the Department of Public Works and Hi-way (DPWH) in the payment of PAF compensation;
 - c) To address complaints and grievances from PAFs and other stakeholders;
 - d) To maintain a record of all public meetings;
 - e) To redress complaints and grievances; and
 - f) With the help of the government officials, assist in the enforcement of applicable rules and regulations related to any infringement into the project site or the Right of Way (ROW).
 - g) DPWH, the relevant government entity, and the National Commission on Indigenous Peoples (NCIP) Provincial or Regional Office will constitute the MRIC through a Memorandum of Understanding (MOU).

9.9.14 **Monitoring and Evaluation**

9.9.14.1 *Objective*

Land Acquisition, Resettlement, Rehabilitation, and IP Policy is the primary goal of monitoring implementation of the Resettlement Action Plan (RAPs), Memorandum of Agreement (MOA) with IPs



in ancestral domains, and IPAPs. Among other things, it includes monitoring land acquisition, compensating those who have lost assets, and relocating those who have been adversely affected.

9.9.14.2 *Scope*

It is assumed that the RAPs will include, but not be limited to, the identification and compensation for the following: for structures and other improvements, as well as land that will be acquired for right of way and income restoration. It is expected that a MOA with impacted IPs will adhere to the structure provided in Part VIII of the 2006 Guidelines for Free and Prior Informed Consent. The Social, Environmental Management Systems Manual outlines the IPAP in detail (SEMS).

9.9.14.3 *Monitoring Mechanisms*

First and foremost, there must be supervision and internal monitoring.

1. RAPs and IPAPs (for affected IPs outside the ancestral domain) will be monitored by the Environmental and Social Services Office (ESSD) under D.O. 58 of the DPWH, which will be referred to as the Internal Monitoring Agent (IMA).
2. Monitoring the execution of RAPs and IPAPs (for those impacted IPs residing outside ancestral areas) in collaboration with the District Engineering Office (DEO), Regional Office (RO), and the Resettlement Implementation Committee is among the responsibilities of the Internal Monitoring Agent (RIC).
3. Reports from PMO and Bank will be submitted to each other through a quarterly report.
4. Monitoring and assessment of IP communities inside and outside ancestral domains should be coordinated with the NCIP.
5. All PAFs should be re-invented, and the re-valuation of assets lost or damaged, as well as the granting of compensation and other rights, must be carried out in compliance with the LARPIPP and their corresponding RAP Reports.
6. For those impacted IPs who live outside their ancestral domain, ensure that the RAP and IPAP are applied as intended.
7. Ensure that the PMO provides the money necessary to execute the RAPs, MOAs, and IPAPs in a timely manner and in sufficient numbers.
8. Keep a record of any and all complaints and their resolutions and make sure they are handled quickly.
9. To monitor the implementation of IPAPs for affected IP communities outside ancestral domains, must collaborate with the relevant NCIP branch and the MRIC

9.9.14.4 *Ancestral Domain Monitoring of MOAs with affected IPs*

When a project proponent enters into a Memorandum of Agreement (MOA), the monitoring, evaluation, and reporting mechanisms specified in the MOA should be used as a direction.



9.9.14.5 *Affected IPS surviving outside of ancestral domains are monitored by IPAPs.*

The Internal Monitoring Agent (IMA) will monitor the IPAP for ICCs/IPs living outside of ancestral domains in collaboration with the NCIP. The External Monitoring Agent will validate the IMA's reports (EMA).

9.9.14.6 *External Evaluation and Monitoring*

The DPWH-PMO has commissioned an External Monitoring Agent (EMA) to carry out independent external monitoring and assessment. Any certified individual or consultancy business with knowledgeable and experienced workers shall serve as the project's external monitoring authority (EMA). The DPWH will create the Terms of Reference for the engagement of the EMA, which must be endorsed by the Bank prior to the engagement.

The EMA's responsibilities will be as follows:

- a) In order to validate and assess the information campaign for PAFs rights and entitlements, including the consultation with affected IPs who live outside ancestral domain,
- b) the NCIP and the IPAP must work together to achieve that the compensation process has been completed;
- c) Verify that the compensation process has been accomplished;
- d) Verify that the compensation process has been completed;
- e) Ascertain whether the resettlement and IPAP entitlements were appropriate to address the objectives and whether the objective has been met;
- f) Assess whether the resettlement and IPAP objectives have been met; specifically, whether livelihoods and living standards have been restored or enhanced;
- g) Assess the efficiency, effectiveness, impact, and sustainability of resettlement and IPAP implementation;
- h) Ascertain whether the resettlement and IPAP entitlements were appropriate to fulfil the objectives, and whether the objective has been met;
- i) If necessary, suggest alterations to the RAP and IPAP implementation processes in order to meet the principles and goals of the Resettlement Policy and IP Framework. The method by which compensation rates were assessed; and the manner in which situations of non-compliance or complaints were handled

9.9.14.7 *Monitoring Stages and Frequency*

The IMA and EMA contract packages were divided into the following stages and monitored on a regular basis:

- a) Keeping an eye on compliance.
- b) For IMA and EMA, this is the initial step in determining whether or not the RAPs and IPAPS were completed in accordance with the policy.
- c) One month after receiving the Notice to Proceed, the EMA will submit an Inception Report and a Compliance Monitoring Report. Prior to beginning civil works, EMA involvement must be



arranged to fulfill the Policy's requirement that RAP and IPAP implementation activities be completed at least one (1) month in advance.

- d) In addition, the EMA will have to perform semi-annual monitoring of RPAP implementation operations every month.
- e) The final verdict is in.

As soon as PAP compensation and IPAP payments have been completed, a final review of the LARRIPP implementation will be conducted.

9.9.14.8 *Post-assessment Evaluation*

A year following the project's completion, this activity will be undertaken to see if the social and economic conditions of the PAFs and the affected IPs have improved.

9.9.14.9 *Planned Implementation and Monitoring of RAPS*

It is the responsibility of the PMO, in conjunction with the ESSD, to devise a timeline for the implementation of RAPs and IPAPs, as well as for the necessary monitoring. All RAP and IPAP activities are anticipated to be completed by the IMA and EMA one month prior to the start of civil works.

9.9.14.10 *Reporting*

The EMA reports to the ESSD and is accountable to the PMO. The PMO furnishes the Bank with copies of the EMA and IMA Reports.

9.9.14.11 *Monitoring indicators*

FOR EMA



Monitoring Indicators	Basis for Indicators
1. Budget and timeframe	<ul style="list-style-type: none"> <input type="checkbox"/> Have all land acquisition and resettlement staff been appointed and mobilized for the field and office work on schedule? <input type="checkbox"/> Have capacity building and training activities been completed on schedule? <input type="checkbox"/> Are resettlement implementation activities being achieved against the agreed implementation plan? <input type="checkbox"/> Are funds for resettlement being allocated to resettlement agencies on time? <input type="checkbox"/> Have resettlement offices received the scheduled funds? <input type="checkbox"/> Have funds been disbursed according to the RAP? <input type="checkbox"/> Has the social preparation phase taken place as scheduled? <input type="checkbox"/> Has all land been acquired and occupied in time for project implementation?
2. Delivery of Compensation and Entitlements	<ul style="list-style-type: none"> <input type="checkbox"/> Have all AFs received entitlements according to numbers and categories of loss set out in the entitlement matrix? <input type="checkbox"/> Have AFs received payments for <u>affected structures and lands</u> on time? <input type="checkbox"/> Have AFs losing from temporary land borrow been compensated? <input type="checkbox"/> Have all received the agreed transport costs, relocation costs, income substitution support and any resettlement allowances, according to schedule? <input type="checkbox"/> Have all replacement land plots or contracts been provided? Was the land developed as specified? Are measures in train to provide land titles to PAFs? <input type="checkbox"/> <u>How many PAFs opted to donate their land to the government?</u> <input type="checkbox"/> <u>How many PAFs did not receive payment because their title is covered by the provisions of Sec. 112 of CA 141?</u> <input type="checkbox"/> <u>How many PAFs opted to donate their lands to the government?</u> <input type="checkbox"/> <u>How many landholdings were subjected to quit claim? Easement?</u> <input type="checkbox"/> <u>How many PAFs accepted the first offer at zonal valuation?</u> <input type="checkbox"/> <u>How many PAFs rejected the first offer and accepted the second offer?</u> <input type="checkbox"/> <u>How many PAFs resorted to expropriation?</u> <input type="checkbox"/> How many PAF households have received land titles? <input type="checkbox"/> How many PAFs have received housing as per relocation options in the RPAP? <input type="checkbox"/> Does house quality meet the standards agreed? <input type="checkbox"/> Have relocation sites been selected and developed as per agreed standards? <input type="checkbox"/> Are the PAFs occupying the new houses? <input type="checkbox"/> Are assistance measures being implemented as planned for host communities? <input type="checkbox"/> Is restoration proceeding for social infrastructure and services? <input type="checkbox"/> Are the PAFs able to access schools, health services, cultural sites and activities at the level of accessibility prior to resettlement? <input type="checkbox"/> Are income and livelihood restoration activities being implemented as set out in income restoration Plan? For example utilizing replacement land, commencement of production, numbers of PAFs trained and provided with jobs, micro-credit disbursed, number of income generating activities



Monitoring Indicators	Basis for Indicators
	<p>assisted?</p> <p><input type="checkbox"/> Have affected businesses received entitlements including transfer and payments for net losses resulting from lost business and stoppage of production?</p>
3. Public Participation and Consultation	<p><input type="checkbox"/> Have consultations taken place as scheduled including meetings, groups, and community activities? Have appropriate resettlement leaflets been prepared and distributed?</p> <p><input type="checkbox"/> How many PAFs know their entitlements? How many know if they have been received?</p> <p><input type="checkbox"/> Have any PAFs used the grievance redress procedures? What were the outcomes?</p> <p><input type="checkbox"/> Have conflicts been resolved?</p> <p><input type="checkbox"/> Was the social preparation phase implemented?</p> <p><input type="checkbox"/> Were separate consultation done for indigenous peoples?</p> <p><input type="checkbox"/> How was the participation of IP women and children</p> <p><input type="checkbox"/> Were they adequately represented</p> <p><input type="checkbox"/> Were special measures for indigenous peoples implemented?</p>
4. Benefit Monitoring	<p><input type="checkbox"/> What changes have occurred in patterns of occupation, production and resources use compared to the pre-project situation?</p> <p><input type="checkbox"/> What changes have occurred in income and expenditure patterns compared to pre-project situation? What have been the changes in cost of living compared to pre-project situation? Have PAFs' incomes kept pace with these changes?</p> <p><input type="checkbox"/> What changes have taken place in key social and cultural parameters relating to living standards?</p> <p><input type="checkbox"/> What changes have occurred for vulnerable groups?</p> <p><input type="checkbox"/> Has the situation of ICCs/IPs improved, or at least maintained, as a result of the project?</p> <p><input type="checkbox"/> Are IP women reaping the same benefits as IP men?</p> <p><input type="checkbox"/> Are negative impacts proportionally by IP men and women?</p>



For IMA

Monitoring Indicators	Basis for Indicators
1. Basic information on PAP households	<input type="checkbox"/> Location <input type="checkbox"/> Composition and structures, ages, education and skill levels <input type="checkbox"/> Gender of household head <input type="checkbox"/> Ethnic group <input type="checkbox"/> Access to health, education, utilities and other social services <input type="checkbox"/> Housing type <input type="checkbox"/> Land use and other resource ownership patterns <input type="checkbox"/> Occupation and employment patterns <input type="checkbox"/> Income sources and levels <input type="checkbox"/> Agricultural production data (for rural households) <input type="checkbox"/> Participation in neighborhood or community groups <input type="checkbox"/> Access to cultural sites and events <input type="checkbox"/> Value of all assets forming entitlements and resettlement entitlements
2. Restoration	<input type="checkbox"/> Were house compensation payments made free of depreciation, fees or

Monitoring Indicators	Basis for Indicators
of living standards	transfer costs to the PPAP? <input type="checkbox"/> Have PAFs adopted the housing options developed? <input type="checkbox"/> Have perceptions of "community" been restored <input type="checkbox"/> Have PAFs achieved replacement of key social cultural elements?
3. Restoration of Livelihoods	<input type="checkbox"/> Were compensation payments free of deduction for depreciation, fees or transfer costs to the PPAP? <input type="checkbox"/> Were compensation payments sufficient to replace lost assets? <input type="checkbox"/> Was sufficient replacement land available of suitable standard? <input type="checkbox"/> Did transfer and relocation payments cover these costs? <input type="checkbox"/> Did income substitution allow for re-establishment of enterprises and production? <input type="checkbox"/> Have enterprises affected received sufficient assistance to re-establish themselves? <input type="checkbox"/> Have vulnerable groups been provided income-earning opportunities? Are these effective and sustainable? <input type="checkbox"/> Do jobs provided restore pre-project income levels and living standards?
4. Levels of PAP Satisfaction	<input type="checkbox"/> How much do AFs know about resettlement procedures and entitlements? Do PAFs know their entitlements? <input type="checkbox"/> Do they know if these have been met? <input type="checkbox"/> How do PAFs assess the extent to which their own living standards and livelihood been restored? <input type="checkbox"/> How much do PAFs know about grievance procedures and conflict resolution procedures? How satisfied are those who have used said mechanisms.
5. Effectiveness of Resettlement Planning	<input type="checkbox"/> Were the PAFs and their assets correctly enumerated? <input type="checkbox"/> Was any land speculators assisted? <input type="checkbox"/> Was the time frame and budget sufficient to meet objectives? <input type="checkbox"/> Were entitlements too generous? <input type="checkbox"/> Were vulnerable groups identified and assisted? <input type="checkbox"/> How did resettlement implementers deal with unforeseen problems?
6. Other Impacts	<input type="checkbox"/> Were there unintended environmental impacts? <input type="checkbox"/> Were there unintended impacts on employment or incomes?
7. IP Indicators	<input type="checkbox"/> Are special measures to protect IP culture, tradition resources rights, and resources in place? <input type="checkbox"/> How are these being implemented? <input type="checkbox"/> Are complaints and grievances of affected IPs/ICCs being documented? <input type="checkbox"/> Are these being addressed? <input type="checkbox"/> Did the project proponent respect customary law in dispute resolution process, in the conduct of public consultation, in IPAP and MOA implementation?



9.9.14.12 *Institutional Set-up for Outside Monitoring Functions*

The External Monitoring Agent (EMA) must be an unbiased agent or entity charged with monitoring the project's RAP implementation.

The Project Management Office (PMO) is responsible for liaising the EMA; ensuring that funds are available for both the EMA and IMA monitoring operations; and delivering the EMA and IMA Monitoring Reports to the ADB and World Bank.

The Environmental and Social Services Department (ESSD) functions as the Internal Monitoring Agent (IMA), in charge of monitoring and evaluating the execution of the RAPs and IPAPs (for those impacted IPs who live beyond ancestral domains). The ESSD should furnish the EMA with copies of RAPs, IPAPs, and other monitoring-related documentation.

9.9.14.13 *Results of Public Consultations Conducted*

The EMA should monitor the outcomes of the LARRIPP, RAP, and IPAP disclosures to the PAPs during the public consultation process for each project contract package.

9.10 Indigenous People Development Plan

When a social evaluation indicates that an infrastructure project may have a negative impact on Indigenous Peoples, an Indigenous Peoples Development Plan must be developed (IPDP). The IPDP details the efforts taken by the DPWH and other government agencies to ensure that Indigenous Peoples impacted by the project get culturally appropriate social and economic benefits. Additionally, it discusses strategies for averting, minimizing, or compensating for acknowledged adverse repercussions.

9.10.1 Need for the IPDP

Infrastructure projects have an effect on the local community throughout its development, upgrade, rehabilitation, or maintenance. Numerous these consequences are unpleasant and may be either temporary or permanent. These have variable degrees of severity for different populations. Certain individuals are more susceptible than others due to pre-existing illnesses and situations. Indigenous Cultural Communities (ICCs) or Indigenous Peoples (IPs) encounter hazards from infrastructure projects on a magnitude and in ways that more mainstream or dominant groups in society do not and are unlikely to encounter. These risks include loss of identity and culture, destruction of traditional livelihoods, exposure to disease, and increased discrimination as infrastructure projects displace them from the land that is inextricably linked to their identity and way of life and deprive them of natural resources on which they rely. Aware of these risks, national and DPWH policy encourages prudence, caution, and care in the planning, design, and implementation of infrastructure projects in order to minimize potential adverse effects on Indigenous Peoples or, in the absence of avoidance, to minimize, mitigate, or compensate for these adverse effects.



9.10.2 Circumstances that Necessitate the Formulation of an IPDP

An IPDP must be developed anytime Indigenous Peoples are anticipated to be impacted by an infrastructure project, regardless of the quantity, kind, intensity, or location of the impacts. When a project impacts only one (1) Indigenous Person (IP), an IPDP is still required. The issue, in this case, is whether the IPAP should be provided as a stand-alone document or should be included in other social protection papers, such as the Resettlement Action Plan (RAP). The impact on the IP community or households may be marginal or low, requiring no resettlement and impacting only a small proportion of the IP families' land. Nonetheless, an IPDP must be developed. An IPDP must be created regardless of whether the impacted IPs are located inside or outside their ancestral domain. When IPs are relocated while other impacted IPs remain in their area of residence, an IPDP must be developed for both the resettled IPs and those remaining in their area of residence.

An IPDP is not necessary if the initiative was originated or requested freely by IPs. If the DPWH enters into a Memorandum of Agreement (MOA) with an affected IP community, either inside or outside an ancestral domain, that offers advantages in addition to those allowed by law, this MOA will act as an IPDP.

9.10.3 Regulations and Guidelines that Govern the Development of an IPDP

Republic Act 8371, or the Indigenous Peoples' Rights Act (IPRA), acknowledges some Indigenous Peoples' or Indigenous Cultural Communities (ICCs) rights that are relevant to the formation of an IPDP.

These include the following:

- a. The right to an informed and intelligent participation in the formulation and implementation of any government or private project that will have an impact on their ancestral domains (Chapter III, Section 7b);
- b. The right to participate fully, if they so choose, at all levels of decision-making in matters affecting their rights, lives, and destinies through procedures determined by them (Chapter IV, Section 16); If relocation is essential as the last resort, it must be done with the IPs and ICCs' free and informed permission (Chapter III, Section 7c);
- c. The right to security in the territories to which they have been relocated (Chapter III, Section 89);
- d. The right to self-determination and self-determination.
- e. The right to define and prioritize their own areas that they own, inhabit or utilize; (Chapter IV, Section 17). The 2004 NCIP Administrative Order (AO) No. 1 series establishes criteria for developing the Ancestral Domain Sustainable Development and Protection Plan, or ADSDPP.

According to the 2004 AO No.1 series, an ADSDPP "embodies the goals and objectives, policies and strategies of ICCs/IPs for the sustainable management and development of their ancestral domain and all of its resources, including human and cultural resources such as Indigenous Knowledge Systems and Practices" (IKSPs). Its mission is to safeguard, promote, and recognize the rights of ICC s/IPs. The ADSDPP, which is based on a community-based planning method, serves as the community's blueprint for the ICC/IPs' overall development



plan. The ADSDPP includes a list and timetable of initiatives and projects aimed at ensuring the long-term development and conservation of ancestral areas. This list assists in the administration of the Free and Prior Informed Consent process (FPIC). The ADSDPP is divided into three (3) primary sections: the Ancestral Domain and Community Situationer; the Development Plans and Programs; and the Policies and Mechanisms for ADSDPP Implementation.

NCIP Administrative Order (AO) No. 3 series of 2012, or the Free and Prior Informed Consent (FPIC) Guidelines of 2012, enumerates and elaborates on the guidelines for Indigenous Peoples to exercise their Right to Free, Prior, and Informed Consent regarding any plans, projects, or activities that will be introduced into or affect any ancestral domain area. Additionally, it outlines the process for requesting a Certification Precondition, conducting a Field Based Investigation (FBI), and obtaining the impacted ICC/IPs' Free and Prior Informed Consent. When an ICC/IP provides its Free and Prior Informed Consent to an infrastructure project, the terms and conditions are reflected and codified in a Memorandum of Agreement between the project proponent, the affected ICC/IPs, the NCIP, and other concerned parties.

According to World Bank Operational Policy 4.10, where projects have the potential to benefit or harm Indigenous Peoples (IP), the borrower undertakes a social evaluation. The borrower or project proponent develops an Indigenous Peoples' Plan (IPP) or Indigenous Peoples' Action Plan based on this social evaluation and consultation (IPAP). The IPAP details the steps the proponent will take to ensure that:

1. Indigenous Peoples impacted by the project get culturally acceptable social and economic benefits; and
 2. Potential detrimental impacts on Indigenous Peoples are identified and avoided, reduced, or mitigated.
- f. The right to define and prioritize their own areas that they own, inhabit or utilize; (Chapter IV, Section 17). The 2004 NCIP Administrative Order (AO) No. 1 series establishes criteria for developing the Ancestral Domain Sustainable Development and Protection Plan, or ADSDPP.

9.10.4 Outline of an Indigenous Peoples Development Plan (IPDP)

The substantive aspects of this outline will guide the preparation of IPDPs. The IPDP will contain the following chapters:

- A. Executive Summary of the Indigenous Peoples Plan
 - o Concisely describes the critical facts, significant findings, and recommended actions
- B. Project Description
 1. Provides a general description of the project;
 2. Discusses project components and activities that may cause impacts on IP; and
 3. Identify project area
- C. Project Development Objectives



D. Project Component/Sub-Component

- Component A: Civil Construction Road Works (includes construction and maintenance of National Highways)
- Component B: Institutional Capacity Enhancement Component (includes the enhancement capacity of institutional capacity of the Local government, NGOs to better manage the project through networks supporting specific interventions in 4 areas like climate resilience, financing, efficient logistic movement, and skill development.
- Component C: Road Safety Component (includes improvement of road safety through safety audits at design, implementation, and operation and maintenance stages)
- Component D: Research and Development Component (it includes research and development studies such as the following:
 - 1. stabilization of soils & pavement layers
 - 2. use of fly ash,
 - 3. demolition waste etc. in the embankments
 - 4. use of waste plastic, modifiers, etc. in bituminous works
 - 5. tree plantation &
 - 6. slope protection using bio-engineering solutions.

E. Social Impact Assessment ⁵³

This section:

1. reviews the legal and institutional framework applicable to Indigenous Peoples in a project context.
2. provides baseline information on the demographic, social, cultural, and political characteristics of the affected Indigenous Peoples communities; the land and territories that they have traditionally owned or customarily used or occupied; and the natural resources on which they depend.
3. identifies key project stakeholders and elaborates a culturally appropriate and gender-sensitive process for meaningful consultation with Indigenous Peoples at each stage of project preparation and implementation, taking the review and baseline information into account.
4. assesses, based on meaningful consultation with the affected Indigenous Peoples communities, the potential adverse and positive effects of the project. Critical to the determination of potential adverse impacts is a gender-sensitive analysis of the relative vulnerability of, and risks to, the affected Indigenous Peoples communities given their particular circumstances and close ties to the land and natural resources, as well as their lack of access to opportunities relative to those available to other social groups in the communities, regions, or national societies in which they live.

⁵³ <https://www.adb.org/sites/default/files/linked-documents/42122-013-ban-ippfab.pdf>



5. includes a gender-sensitive assessment of the affected Indigenous Peoples' perceptions about the project and its impact on their social, economic, and cultural status.
 6. identifies and recommends, based on meaningful consultation with the affected Indigenous Peoples communities, the measures necessary to avoid adverse effects or, if such measures are not possible, identifies measures to minimize, mitigate, and/or compensate for such effects and to ensure that the Indigenous Peoples receive culturally appropriate benefits under the project.
- F. Objectives – The overall objective of social assessment study is “to better understand and address social development issues, and ensure accomplishing the outcomes – inclusion, cohesion, equity, security, decentralization, and accountability
1. Aspects of Social Assessment
 - Beneficiary Assessment
 - Stakeholder Analysis
 - Impact Assessment
 - Institutional Analysis
 - Risk Assessment and Analysis
 - Development Monitoring and Evaluation Framework
 - Capacity Building Framework
 - Implementation Arrangements
 - Budget for the Project
 - Associated Preparation Activities
 - IPs/ICCs issues

The objectives of the Indigenous People's Planning Framework (IPPF) are to ensure that the IPs/ICCs are:

- a. Adequately and fully consulted
- b. Enabled to participate in the project and derived full benefits; and
- c. That the project's institutional implementation arrangements take due note of the existing government in the IPs/ICCs areas as specified with Philippine Constitution and relevant legal provisions. The IPPF is prepared in accordance with the WB Policy as well as legal provisions of the Philippine Government.
 - Need for Developing Indigenous People's Planning Framework (IPPF)
 - Adhering to Safeguard Provisions for IPs/ICCs
 - Alignment of the Project with Current Government Initiatives
 - Improving Socio-Economic Status

G. Beneficial Measures

This section specifies the measures to ensure that the Indigenous Peoples receive social and economic benefits that are culturally appropriate, and gender-responsive.



H. Mitigative Measures

This section specifies the measures to avoid adverse impacts on Indigenous Peoples; and where the avoidance is impossible, specifies the measures to minimize, mitigate and compensate for identified unavoidable adverse impacts for each affected Indigenous Peoples groups

I. Capacity Building

This section provides measures to strengthen the social, legal, and technical capabilities of (a) government institutions to address Indigenous Peoples issues in the project area; and (b) Indigenous Peoples organizations in the project area to enable them to represent the affected Indigenous Peoples more effectively.

J. Grievance Redress Mechanism

This section describes the procedures to redress grievances by affected Indigenous Peoples communities. It also explains how the procedures are accessible to Indigenous Peoples and culturally appropriate and gender-sensitive (see details of GRM).

K. Monitoring, Reporting, and Evaluation

This section describes the mechanisms and benchmarks appropriate to the project for monitoring and evaluating the implementation of the IPP. It also specifies arrangements for the participation of affected Indigenous Peoples in the preparation and validation of monitoring and evaluation reports.

L. Institutional Arrangement

This section describes institutional arrangement responsibilities and mechanisms for carrying out the various measures of the IPP. It also describes the process of including relevant local organizations and NGOs in carrying out the measures of the IPP.

M. Budget and Financing

This section provides an itemized budget for all activities described in the IPP.



10 GENDER AND DEVELOPMENT

Overview:

Men and women may experience benefits and risks associated with project-sponsored activities differently, and as such gender is considered in the project an important cross-cutting issue. Resettlement and livelihood changes stand to impact both men and women, though households led by single women may face additional challenges where they are reliant on the availability of existent social networks and extended family for the care of their children. The Project shall advocate gender mainstreaming as a key strategy for promoting gender equity, and for ensuring that women participate in all phases of resettlement activities, and that their needs are explicitly addressed in the decision-making process.

The Transportation Infrastructure Sector in the Philippine Plan for Gender Responsive Development (PPGD) and NEDA Harmonized Gender and Development Guidelines for Project Development, Implementation, Monitoring and Evaluation outlines responses to make road infrastructure projects gender responsive. To facilitate the gender responsive planning in infrastructure project, the use of the DPWH Gender Toolkit provides comprehensive guidelines which contain a set of tools for the gender considerations in various phases of the project. These planning tools are summarized below in various phases of the project cycle from planning, design, pre-construction and construction and maintenance.

Objective	Promote and increase participation of women in policy formulation, decision-making, planning, implementation, operation and maintenance activities in the infrastructure sector.
Deliverable	Gender Analysis Report; Gender Action Plan (if applicable)
Timing	Feasibility, Implementation Stage
Lead	GAD Focal Point System
Support	ESSD Technical Working Group
Reference	Section 14, Article II of the 1987 Philippine Constitution, RA 7192 Sec 5 Women in Development and Nation Building Act RA No. 9710 Sec 2 Para 5 Magna Carta of Women Executive Order 273 series 1995 -- approving and adopting The Philippine Plan for Gender-Responsive Development, 1995 To 2025 RA 11313 Policy of Safe Spaces Act Annex 10-2: Guide for Field Inspection of Gender Responsiveness of Road Infrastructures and Related Facilities

10.1 Gender Policies

The Project shall advocate gender mainstreaming as a key strategy for promoting gender equity, and for ensuring that women participate in all phases of resettlement activities, and that their needs are explicitly addressed in the decision-making process. Gender policies and programs are reflected in the *DPWH Toolkit for Making Road Infrastructure Project Gender Sensitive (2011)*. Overall, the gender and development are governed by the following policies:



- Section 14, Article II of the 1987 Philippine Constitution, which states that “the State recognizes the role of women in nation building and shall ensure the fundamental equality before the law of women and men”.
- Republic Act 7192 or the Women in Development and Nation Building Act which promotes the integration of women as full and equal partners of men in development and nation building.
- Executive Order 273 series 1995 -- approving and adopting The Philippine Plan for Gender-Responsive Development, 1995 To 2025 -- directing all government agencies and local levels “to institutionalize GAD efforts in government by incorporating GAD concerns in their planning, programming and budgeting processes;
- A section of the annual General Appropriations Act (Section 32 of GAA 2010) directing government entities to: a) formulate a Gender and Development (GAD) Plan designed to address gender issues within their concerned sectors or mandate and implement applicable provisions in the Convention on the Elimination of All Forms of Discrimination Against Women, the Beijing Platform for Action, the Millennium Development Goals (2000-2015) etc.; and b) allocate at least five per cent of the agency's or local government's total FY 2010 budget appropriations for the implementation of their Gender and Development Plan; and
- The Magna Carta of Women or RA 9710, which enjoins all departments, including their attached agencies, offices, bureaus, state universities and colleges, government-owned and -controlled corporations, local government units, and other government instrumentalities to adopt gender mainstreaming as a strategy to promote women's human rights and eliminate gender discrimination in their systems, structures, policies, programs, processes, and procedures.

Complementing the DPWH Toolkit is the mainstreaming of anti-TIP work in the DPWH core functions and services as provided in DO 111 s 2016 “*Guidelines for the implementation of DPWH Anti-Tip Policy to Attain Zero Tolerance Against Trafficking in Person.*” This policy governs inclusion of a zero tolerance requirement in regards to staff conduct on TIP to be signed upon hiring, allocation of resources in the DPWH GAD annual budget for anti-TIP awareness raising, trainings of staff and giving out of information materials for clients, including signages, and institutionalization of mechanism for redress for TIP cases involving DPWH personnel⁵⁴. Overall, the Policy stipulates the following:

All *DPWH* personnel, contractors, contract workers shall be prohibited from:

⁵⁴ Ref. item 3.3 DO111 s. 2016





- a. engaging in any form of trafficking in persons.
- b. procuring prostituted persons; and
- c. using forced labor, involuntary servitude, slavery or slavery-like practices.

The *following* specific actions will be done to address gender issues during the initial stage and shall be undertaken in the remaining stages of the project.

- (i) During focus group discussion, consultation meetings and workshops, women as well as men will be invited.
- (ii) In the planning of the income restoration program, PAPs comprising of men and women will be consulted during the workshop.
- (iii) For the relocating PAPs, a separate discussion with women from affected households and female-headed PAPs, shall be held to discuss and agree on their relocation preference.
- (iv) Compensation will be given to both men and women.
- (v) Disaggregated monitoring indicators by gender, ethnicity, and gender of the head of displaced households will be developed, for monitoring capacity development training program, livelihood program, participation, and other resettlement activities.

10.2 Five levels of Equality and Empowerment ⁵⁵

The framework below is utilized to illustrate an understanding of women's empowerment as a process in overcoming gender inequality.

Levels of Equality	Increased Equality	Increased Empowerment
Control		
participation		
conscientization		
Access		
Welfare		

It is suggested that these levels or equality are in dynamic, synergistic relationship and mutually reinforcing at all levels.

Level 1 - Welfare I: This is the level of material welfare of females, relative to males in such areas as nutritional status, medical care, education, income. The gender gap can be identified through the disparity between men and males and females on indicators such as nutrition, mortality rates,

⁵⁵ As outlined by Sara Longwe used also as reference in DPWH Toolkit



education, etc. With respect to roads and transport project: Are men and women provided with this service equitably? Is it user friendly for PWDs men and women and vulnerable groups?

Level 2 - Access: The gender gap at the welfare level arises directly from inequality of access to resources as women generally have lower level of productivity arising from restricted access to land, credit, labor, education wage employment, etc. Does the infrastructure project provide opportunity or access for men and women to employment in operation, maintenance, construction and management. Do men and women have equal pay?

Level 3 - Conscientization. Here, the gender gap is due to belief that women are less effective or “weak” and therefore has limited rights and choices. Thus, inequality arises in gender division of labor in infrastructure projects due to lack of awareness on their rights to benefits of the project, to consider the needs of both men and women in the design of the infrastructure?

Level 4 - Participation: In this level, the gender gap is easily quantified in terms of participation of women in decision making, in project formulation, in implementation and evaluation. Do women have participation in the infrastructure planning, in GRM Committee, in choosing the location of infrastructure or they only are considered as passive beneficiaries?

Level 5: Control. At this level, the gender gap is manifested if there is unequal power relation between men and women, men tend to dominate women in terms of access over resources and distribution of benefits. Equality, participation and control are necessary pre-requisites in order to make progress towards gender equality in welfare provision such as infrastructure projects.

10.3 Planning Tool for Gender

10.3.1 Planning Stage

Toolkit 1: Crafting Gender Conscious Feasibility Studies and Terms of Reference - A Checklist

Planning Stage	Where to mainstream gender consideration
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1. FS project title
2. Concept and introduction/background, purpose and project strategy
3. Preliminary design; include statement such as establish, review and recommend the appropriate highway design for the project considering among others:
 - *Design speed;*
 - *Traffic safety;*
 - *Improvement in transport network capacity and connectivity;*
 - *Support urban management concerns;*
 - *Results of the gender analysis and recommendations to make the project gender responsive;*
 - *Minimum adverse social and gender equality impacts by least number of resettlement;*
 - *Preservation of the environment;*
 - *Minimum right-of-way take; and*
 - *Measures on potential natural hazards that will affect women and men.*
4. Gender responsive action plan
5. In manpower requirements

Tool 2: Stakeholder Analysis

The purpose of stakeholder analysis is to:

- Ensure inclusion of relevant stakeholders
- Maximize the role and contribution of each stakeholder

Procedure:

1. Specify issues to be addressed. Identify specific issues such as location of the infrastructure that will provide access to specific issues or needs of women and children, such as safety, access and mobility
2. Prepare a list of potential list gender issues that may significantly affect various categories of people. For example,
 - Will the project have adverse effect on the economic resources of men and women?
 - Identify those who have information and knowledge about particular issue
 - Identify those who have control or influence on the issue
3. Stakeholders mapping
 - Identify who are the stakeholders (primary stakeholders or secondary stakeholders)
 - Specify the roles, interest and contribution to the project.



- Specify their capacity, experience in mainstreaming gender consideration, participation in gender related activities
- Identify those with leadership to influence gender equality, addressing gender issues and
- Willingness to participate in orientation, training on gender awareness, sensitivity
- List down common activities where men and women are involved in decision making

Tool 3: Gender Analysis

- To ensure the needs of both women and men are considered and addressed
- To improve decision making and implementation

Procedure

1. Use of sex disaggregated data to improve gender-sensitive information collection.

Both quantitative and qualitative data can be obtained from the following source:

- Regions – Province – Cities – Municipalities - Barangay
- Sectors and Target Groups (e.g., Fishermen and Fisherwomen – Men and Women Farmers – Women and Men in Urban Informal Economies: Women Vendors, etc.)
- Organizations (e.g., DPWH – how many male and female ASECs, USECs, Bureau Directors)

2. Analyze sex -disaggregated data for road infrastructure project

- Road users – percentage of men, women, girl children or boy children who are using the road
- Income and Employment - percentage of families (men and women who are engaged in economic activities near the road, number of hours travelled to source of employment, hours saved due to improved road
- Women's participation - % of women who are in government system, leaders or are in the private sector

3. Analysis of sex -disaggregated data for road infrastructure project

Example of a sex disaggregated data Labor force in the Philippines		
Philippines	Men	Women
2008	19.4%	16.2%
2011	18.3%	15.2%
2012	18.2%	14.9%

This data show there is gender disparity between men and women in labor force

4. Conduct of Focus Group discussion



- This activity could be linked and follows the activity specified in Section 5.2.4.6 with due consideration of ensuring equal participation of men and women in consultation activities using various approaches such as FGDs, KIIs and in social survey.
- During consultation, invite both men and women in focus group discussion, meetings and workshops,

Tool 4 Gender Aware - Cost benefits Analysis

The cost benefit analysis aims to enhance planning using gender-based information data to highlight the benefits that women and men could benefit from the road project both qualitative and quantitative terms.

Procedure

1. Conduct an analysis of the community economic system where the road project is to be implemented. Recommended Matrix (1-4) to use is specified in Tool#4 of the Gender toolkit.
2. Analyze results based on gender disaggregated data and information. Review the questions and provide appropriate answers using the filled-up Matrix specified in item 1.
3. Use the Matrices as baseline for the Gender Aware Cost Benefit Analysis as part of the Feasibility /study

Tool 5: Reviewing the feasibility Study: checking for Gender Sensitive Language and Consistency in Content and Substance

Procedures:

1. Use of checklist - See

Annex 10-1: FS and Implementing Design for Gender Consideration

Annex 10-2.

2. Gender equality should be inferred in the Introduction/Background, Purpose, Objectives and Project Strategy and these are mentioned in the completed FS.
3. Check for gender data and statistics and gender information
4. Check for Gender Sensitivity in the FS

10.3.2 Design stage

Tool 6: Reviewing the Design: Checking for Consistency in Integrating Identified Gender Needs- A Desk Review and Design Validation Exercise

Procedures

Step 1. Gather all the gender related recommendations which have surfaced during the planning phase specifically those that are included in the FS.

- Who the primary/major stakeholders of the project recommended in the stakeholder analysis? Draw a list.



- Who are the women consulted? Draw a list.
- Who are the gender experts and gender/women institutions consulted? Draw a list.
- What kind of sex-disaggregated data and statistics have been gathered? Compile thesedata.
- What are the recommendations as a result of the gender analysis? Compile theserecommendations.
- What are the recommendations as a result of the consultations done with gender expertsand gender/women institutions? Compile these recommendations.

Step 2. Invite women and men for a short FGD (maximum 2 hours). The participants should be drawn based on the list of stakeholders and the list of women who were consulted during the FS stage. During the FGD, do the following:

- Present the sex-disaggregated data and statistics that have been gathered and compiled.
- Present the recommendations as a result of the gender analysis.
- Present the recommendations as a result of the consultations done with gender experts and gender/women institutions.
- Present the engineering design. It will benefit everyone if this presentation is done using the artist's perspective. Using 3D or 2D visuals will help FGD participants envision the project correctly.
- After all the presentations and clarifications have been made, in plenary, ask the following focus questions, ask the women first, followed by the men, and organize their responses using the matrix:

Step 3. Check for consistency in terms of requirements for PWDs or Specially-abledWomen and Men as mandated by Batas Pambansa Bilang 344 – Accessibility Law

Step 4. Package the output and draw recommendations for the design team



Tool 7. Maximizing the Potentials of the Programme of Work: Ensuring Women Participation and Identifying Areas for Engaging Stakeholders during the Pre-Construction and Construction Stage

Procedures

Step 1. During pre-construction stage: identifying areas for women participation in the construction of road infrastructure.

- The DPWH Project Team together with a gender specialist identifies in which areas of work women can be integrated. A list of work for women is generated.
- If and when possible, this listing, and the rationale for providing jobs for women during the construction phase is included in the bidding documents, particularly in the section instruction to bidders. If this is not possible, the DPWH Project Team together with the gender specialist negotiates with the construction firm to provide employment opportunities for women during the construction phase using the list of work for women as reference.
- The DPWH Project Team together with the gender specialist and representatives of the construction firm draw-up social safeguards for women workers.

Step 2. During the construction stage: identifying areas for engaging Bantay Lansangan

during the construction of road infrastructure.

Invite heads of NGOs and CSOs, church/faith-based groups operating in the area where the road infrastructure project is to be implemented for a meeting. It is also highly recommended to seek out NGOs/CSOs who have track record in monitoring road infrastructure projects such as *Bantay Lansangan*. If there is no such group in the area, participants to this meeting should be drawn based on the list of stakeholders and the list of women who were consulted during the FS stage.

During the meeting:

- Present the road infrastructure project.
- Present the rationale and benefits in engaging stakeholders during the construction of road infrastructure.

Step 3. The CSO/NGO volunteer renders a report on the result of the monitoring using the matrix above as basis and submits to DPWH, the Contractor and to the DPWH Committee on Gender and Development (COGAD).

Step. 4. The DPWH COGAD Technical Working Group (TWG) shall evaluate the report submitted by the CSO/NGO volunteer and formulate recommendations for improving gender mainstreaming in road infrastructure projects addressed to the DPWH COGAD Steering Committee for appropriate action.



10.3.3 Maintenance Stage

Tool 8. Conducting Quick Participatory Gender Audits of Completed and Functional Road Infrastructure Projects and Rendering a Report

Procedures:

Step 1. Desk review of key documents of the project.

- Gather critical and strategic project documents to be reviewed. Project Proposal, TORs of FS, RAP, EIA, Design and Specifications, Program of Works, Bidding Announcements and Gender Reports by the Stakeholders (Tool 7), MOAs and MOUs, among others.
- Gather quantitative and verifiable baseline gender data and information and determine which among these gender data and information have been used in project design.
- Use *Tool 5. Reviewing the FS: Checking for Gender Sensitive Language and Consistency in Content and Substance* to check for sensitivity and consistency of gender messages in the project documents.
- Formulate recommendations to improve gender mainstreaming in future project documents.
- Formulate good/best actions and practices.

Step 2. Semi-structured individual and group interviews.

- List names of women and men to be interviewed. Include in the list of interviewees those who are directly involved in the implementation of the project and the users/beneficiaries of the road infrastructure.
- Gather insights on how gender actions were implemented in the different stages of project development and implementation cycle: planning stage, design stage, pre- construction and construction stage, and maintenance stage.
- Use the results of the interview to draw a profile on the gender responsiveness of the project cycle and craft recommendations on how gender mainstreaming can be further improved in project planning, design, pre-construction and construction, and maintenance stage.
- Formulate good/best actions and practices.

Step 3. Participatory workshops with project staff: managerial, professional and general (support) staff. This workshop can be done during the project's exit conference.

- The workshops are organized as soon as the majority of the interviews are completed. At this stage, the gender audit team is quite familiar with the workings of the project team. The desk review and the interviews will have provided a great deal of insight into the dynamics of the project, and the issues that may need further probing will have surfaced.
- List names of women and men who will be invited to the gender audit workshop. Include in the list of participants those who are directly involved in the implementation of the project and the users/beneficiaries of the road infrastructure. A total of 20 participants, equal number of men and women will be enough to generate gender information and issues on the project.



- Design the workshop with the following objectives in mind:
 - To know the gender actions that have been implemented during the stages of project implementation and how the gender actions were done, and to know who implemented the gender actions.
 - To know what improvements in the quality of life is being expected by the stakeholders/beneficiaries as a result of the gender actions that have been implemented in the road infrastructure project.
 - To gather recommendations on how to improve gender mainstreaming in implementing road infrastructure projects.
- Formulate good/best actions and practices.

Step 4. Writing the report

Tool 9. An Assessment Tool on the Gender Responsiveness of Road Infrastructures and Related Facilities

Procedures:

Before using this tool, do the following steps:

1. Select the road infrastructures and facilities to be assessed (i.e., location, and specific areas and facilities to observe); this infrastructure should be located in an area where people are visible (walking, traveling) or services are located (e.g., schools, medical facilities, employment, market, etc.); priority may be given on arterial roads.
2. If inspection is undertaken within a training and with a very limited time (i.e., 30 minutes to 1 hour of observation), the most feasible area for inspection is a 1-kilometer road stretch; if outside of the training, then enough time can be allocated for observing the whole selected portion of the road project.
3. Form a team of at least two field observers and analysts (male and female). Criteria for selection include: i) high level of gender awareness, sensitivity and responsiveness as shown in his or her score in Tool 1 of this Toolkit; and ii) fully supports the vision of gender responsive road infrastructures as shown in his or her score in Tool 2 of this Toolkit.
4. Prepare the necessary materials, i.e., field observation guide, video camera, and pen.
5. Set the date(s) of the field inspection.

During the field inspection:

1. Move around and inspect the road infrastructures and facilities.
2. Use your camera in recording the key features.
3. Use the field inspection guide in identifying areas for observation and inspection.

After the field inspection:

1. Convene the team of field inspectors and analysts.

Together, the members of the team will review the Field Inspection Guide and select the items that are applicable to the observed road infrastructure. For instance, there are items that may not be applicable to rural national roads or to city/urban roads, or to unpaved roads. These items can be assessed as "Not Needed". Corresponding cells are thus ticked.



10.4 Logical Framework

A gender responsive logical framework (or logframe) is provided below to show the mainstreaming of gender related output of a program design, process activities as well as monitoring of immediate outputs. This logframe should be flexible and updated as needed. Minimum and basic information are provided in the logframe.

Table 10-1: Sample Matrix on Logical Framework (Logframe) for Gender Responsive Infrastructure project

	PROJECT SUMMARY	INDICATORS	MEANS OF VERIFICATION	RISKS / ASSUMPTIONS
Goal	<ul style="list-style-type: none"> Improved access to modern (motorized) transport services and facilities. Access to all-weather roads. Transport as “enabler” of access to key economic and social services: markets, health posts, education facilities. Improving access to employment opportunities (economic mobility). 	# of men and women utilizing the road and transport # of men and women with improved access to Economic activities # increase of enrolment in school due to all weather good road	Project document Joint memorandum Circular MOA Memorandum of Agreement Project contracts	GAD budget is secured Contractors able to reach 50% employment for local men and women JMC partners are mobilized on time COVID 19 protocols continues to pose as a threat
Outcomes	<ul style="list-style-type: none"> Savings on time due to improved road infrastructure Increased access to school enrolment, and i Employment of men and women in project 	# reduced travel time by _% # of men and women employed in project # of men and women gaining access other # of vulnerable men and women receiving aid	Monitoring Report Names of partners in implementing GAD program Quarterly IMA Report Annual IMA Report	Compliance of contractor to labor and employment target men and women
Outputs	<ul style="list-style-type: none"> Road infrastructure facility constructed as planned Economic opportunities generated by the project employing men and women Access roads for vulnerable men and women, PWD 	# type and quality of road # All weather road Safety measures in place Provision of facility for PWD (men and women)	Pictures of the road facility Internal Monitoring report (quarterly, semiannual) Annual Report Report on referral services Photographs on livelihood activities	Infrastructure project is maintained properly Participation of community in environmental management No threat on environmental and natural catastrophe
Activities	Data gathering Stakeholder participation and analysis Conduct of FGD, Surveys Implementation of livelihood program benefitting men and women	# Data base disaggregated by gender # of men and women participating in consultation activities	Master list of PAPs	Budget released on time Close monitoring of project implementation of programs benefitting men and women



10.5 Parameters for Understanding the Logframe

In order to gain an understanding of a gender sensitive logframe, the following define the parameters and components of the logframe.

1. **Project Goal.** The goal is the impact that this project, if combined with others, will achieve. Usually this is a programme or sector objective. In terms of road project, it specifies in general terms of what the project will contribute to the intended beneficiaries.
2. **Project Outcome.** The outcomes define why the project is being done. It describes the desired outcome. Ideally, a project should have only one purpose, so that activities and outputs have a clear focus. Projects with multiple purposes and a diverse range of outputs can be undermined by a lack of direction. A gender sensitive outcome provides a target for opportunities and benefits for men and women or boys and girls using the infrastructure project. For example, for road projects, outcomes could be defined as savings in time, and employment opportunities for both men and women, thus increasing household income.
3. **Goal level indicators.** Indicators often describe an infrastructure project objectives/outcomes which would include targets on how many will be benefit on the project in quantifiable terms. Ex. Number of men and women with access to economic opportunities provided by the project.
4. **Outputs.** This define what the project is expected to accomplish. These are the deliverables and can form the key objectives of the project terms of reference. Outputs are the results for which the project team can be held directly accountable and for which it is given resources. Ex. Access roads generated for vulnerable men and women such as PWDs, senior citizen, or bridges connecting the adjacent barangay improving access during wet season; road pavement for pedestrians. Are these accomplished on time as defined in the project ToR?
5. **Activities.** These define how you will do the project – the actions that will be implemented to accomplish the outputs and the inputs needed to accomplish the target. Typically, the activities are processes to be done or milestones to accomplish the objectives, comprising of running activities, as defined in the workplan such as consultation, surveys, FGDs, data gathering, etc.
6. **Output and activity level indicators** often feature in the terms of reference for the project. If, for example, one of the outputs is all weather road safety measures in place and implemented then the appropriate indicator could be “all road is cemented and accessible for all weather condition; or “potholes have been cemented”; etc. Generally, a timeframe is set for this purpose to monitor achievement during implementation, and in defining the number of men and women, boys and girls in utilizing the infrastructure facility.
7. **Means of verification (MOV)** describe the sources of information that will demonstrate what have been accomplished. These could be agreements done with partner agencies, ex. MOUs, project contracts, minutes of meetings, monitoring reports, photographs, master list of PAPs, Eligibility and entitlement matrix, signed payments, grievance resolution, etc. Are the institutions involved responding to their commitments? Are budget appropriated and utilized as planned for skill training, for the civil works, etc. Verifiable indicators should be targeted in



terms of quality, quantity and time. These indicators and the means of verification must be practical and provide a cost-effective basis for project monitoring and evaluation.

8. **Risks and Assumptions** at each level of a logframe are the necessary conditions or events over which the project has little or no control. Some risks may pertain to delays due to pandemic (Covid 19), other assumptions may pertain to delays in fund releases, or uncooperative LGUs and participation of the community in maintenance and operation.

Overall, the cause and effect relationships between the activity-to-output, output-to-purpose and the purpose-to-goal objectives describe the necessary and sufficient conditions for accomplishing project objectives, in a well-designed gender-sensitive project logframe.