SOCIAL AND ENVIRONMENTAL MANAGEMENT SYSTEMS
OPERATIONS MANUAL

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<th>Description</th>
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<tr>
<td>BOD</td>
<td>Biochemical oxygen demand</td>
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<tr>
<td>COC</td>
<td>Chain of custody; chain-of-custody form</td>
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<tr>
<td>COD</td>
<td>Chemical oxygen demand</td>
</tr>
<tr>
<td>CAA</td>
<td>1999 Philippine Clean Air Act (R.A. 8749)</td>
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<tr>
<td>CNC</td>
<td>Certificate of Non-Coverage</td>
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<tr>
<td>DAO34</td>
<td>DENR Administrative Order No. 34 of 1990</td>
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<td>DAO35</td>
<td>DENR Administrative Order No. 35 of 1990</td>
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<tr>
<td>DAO96-37</td>
<td>DENR Administrative Order No. 37 of 1996</td>
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<tr>
<td>DENR</td>
<td>Department of Environment and Natural Resources</td>
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<td>DPM</td>
<td>DAO96-37 Procedural Manual</td>
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<tr>
<td>DPWH</td>
<td>Department of Public Works and Highways</td>
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<tr>
<td>ECC</td>
<td>Environmental Compliance Certificate</td>
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<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<tr>
<td>EIAMG</td>
<td>EIA Management Guide (by Carl Bro International)</td>
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<td>EIAPO</td>
<td>EIA Project Office (DPWH)</td>
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<td>EIARC</td>
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<td>EIS</td>
<td>Environmental Impact Statement</td>
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<td>EMB</td>
<td>Environmental Management Bureau</td>
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<td>EMP</td>
<td>Environmental Management Plan</td>
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<td>EMoP</td>
<td>Environmental Monitoring Plan</td>
</tr>
<tr>
<td>GPS</td>
<td>Geographical Positioning System</td>
</tr>
<tr>
<td>HVS</td>
<td>High Volume Sampler (for dust monitoring)</td>
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<tr>
<td>IEE</td>
<td>Initial Environmental Examination</td>
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<tr>
<td>IO</td>
<td>Implementing office</td>
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<tr>
<td>LARR</td>
<td>Land Acquisition, Resettlement and Rehabilitation (Policy)</td>
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<tr>
<td>MOA</td>
<td>Memorandum of Agreement (between DPWH and DENR)</td>
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<td>MMT</td>
<td>Multipartite Monitoring Team</td>
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<tr>
<td>NRIMP</td>
<td>National Roads Improvement and Management Project</td>
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<tr>
<td>PD</td>
<td>Presidential Decree</td>
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<tr>
<td>PM</td>
<td>Project manager</td>
</tr>
<tr>
<td>PMO</td>
<td>Project Management Office (DPWH)</td>
</tr>
<tr>
<td>RA</td>
<td>Republic Act</td>
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<td>RAP</td>
<td>Resettlement Action Plan</td>
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<td>TL</td>
<td>Team Leader</td>
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1 Introduction

1.1 Purpose of Manual

This Social and Environmental Management Systems (SEMS) Operations Manual is designed to provide guidance in undertaking various regular tasks for social and environmental impact assessment for infrastructure projects of the Department of Public Works and Highways (DPWH or Department). Through the manual, the DPWH strives to ensure the quality of its output and streamline its operations. For the different implementing offices (IO) within the DPWH that are involved in social and environmental impact assessment such as the Environmental Impact Assessment Project Office (EIAPO), the Project Management Offices (PMOs), Environmental Impact Assessment Regional Office (EIAROs) and the district offices, the manual also seeks to foster standardization and self-sufficiency. The manual can also serve as training material and comprehensive guide for new and existing employees.

The procedures covered by this manual fall under EIAPO’s role as DPWH’s agency for social and environmental concerns. However, other offices are expected to make use of the manual in obtaining information on departmental policy and procedures.

This manual will be regularly revised to correct errors, address weaknesses and reduce vagueness. It will also be periodically updated to reflect lessons learned and to comply with new policies issued both within and outside the DPWH. As additional tools are developed and skills are acquired, this manual is also seen to continuously grow in content and detail.

Although this manual will become the principal reference to be used by DPWH, particularly the EIAPO, in its operations, users are expected to consult more specialized manuals for performing some of the technical tasks. Most of those that appear in the list of references are available at the EIAPO, including several existing manuals developed for the office. This SEMS manual supercedes these older in-house materials in some respects, but in most cases it aims to supplement, provide structure to, and optimize their use.

1.2 Organization of Manual

The SEMS Operations Manual organizes the environmental and social assessment tasks into four main functions. These functions, and the tasks subsumed under them, are as follows:

1. Environmental Impact Assessment (EIA) Preparation - tasks related to the writing and submission of EIAs, Initial Environmental Examinations (IEEs), IEE checklists and Certificates of Non-Coverage (CNCs).
2. Post-ECC activities – tasks related to ensuring conformity with Environmental Compliance Certificates (ECCs), environmental standards, and other laws
3. Environmental Project Audit – tasks related to EIAPO’s duties within the DPWH project cycle.

For each task, the following components are discussed:

- Objective – defines the purpose of the task
- Lead Person – the person who should perform the task or direct its completion
- Support – persons to assist the Lead Person
- Materials and Equipment – tools needed
- Overview – brief introduction or description of the activity
- Procedures – the steps to be performed or directed by the Lead Person
- References / Additional Guidance – sources of supplementary information.

Many of the tasks involve other sub-tasks for which procedures are also found in this manual. Whenever possible, a report template or a checklist necessary in completing the task is supplied in the annexes.

1.3 DPWH Environmental Policy

The environmental policies with which the procedures discussed in this manual seek to comply can be classified into four types: national guidelines enforced by the Department of Environment and Natural Resources (DENR), the Department’s internal rules (usually in the form of Department Orders), policy statements, and policies laid out by funding agencies. Those policies directly related to the tasks found in this manual are briefly discussed below.

1.3.1 National Policy

The basic national policy governing environmental functions of DPWH is stated in Presidential Decree (PD) 1586, also known as the Philippine Environmental Impact Assessment Law, which requires the DPWH to undertake environmental impact assessments for all its major projects. Compliance means that all projects implemented by the DPWH are covered by an Environmental Compliance Certificate (ECC) unless exempted by the DENR. This law was updated by DENR Administrative Order No. 37, series of 1996, more commonly known as DAO96-37, which also prescribed the specific procedures to be followed in complying with the EIA law.

Environmental quality guidelines which the DPWH must observe are embodied in DENR Administrative Orders 34 and 35 (1990) for water quality, and Republic Act No. 8749, also known as the Clean Air Act. Laws governing the toxic and hazardous materials are covered by Republic Act No. 6969. As an agency whose activities potentially generate pollutants in various forms, the DPWH has assigned the EIAPO to ensure that contractors are aware of, and in compliance with these guidelines.

Because construction activities also pose a risk to wildlife and biological resources through habitat encroachment or degradation, Republic Act No. 9147 (Conservation of Wildlife
Resources and their Habitats) also applies to the DPWH. This law precludes infrastructure development in areas already classified as protected.

As a heavy user of temporary labor in infrastructure development, the DPWH is required to enhance social benefits to the communities affected by its projects. Under Republic Act No. 6685, at least 50 percent of unskilled labor and at least 10 percent of skilled labor requirements of public works projects must be hired locally.

1.3.2 Department Orders

Strengthening the EIAPO was the subject of Department Order No. 220 issued by the Secretary of Public Works and Highways in November 1999, pursuant to a Memorandum of Agreement (MOA) between the Department of Environment and Natural Resources and the DPWH forged earlier that year. The EIAPO’s roles were extended beyond EIA compliance to include the design and implementation of Resettlement Action Plans (RAPs), public consultation and information dissemination, and providing guidance and training to all DPWH offices.

In 1999 the DPWH adopted the Land Acquisition, Resettlement and Rehabilitation (LARR) Policy to avoid, mitigate or compensate for adverse social impacts of infrastructure projects.

Improving upon Republic Act No. 6685 mentioned earlier, the DPWH issued two orders, D.O. No. 93 (1988) and No. 51 (1990), committing to a higher percentage of local hiring: 70 percent and 30 percent of unskilled and skilled respectively must come from the host locality.

Memorandum Circular No. 55 (2001) disseminates R.A. 8974 requiring the DPWH to ensure rapid processing of all applications for compensation for rights-of-way. This rule is however just one of a series of memoranda and Department orders related to providing just compensation for assets and lands acquired or displaced by DPWH projects.

In 1996, the World Bank funded the National Roads Improvement and Management Project (NRIMP), a program to assist the Philippines in extending and maintaining its land transportation network. Roads built under this project must demonstrate a new and higher level of social sensitivity and compliance with all applicable environmental standards.

1.3.3 Vision and Mission

The Department’s environmental and social vision and mission is articulated in the EIAPO 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.

Complementing this vision is the mission statement reflecting the DPWH’s and EIAPO’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 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.

These statements provide the DPWH, through EIAPO, with a clear goal and a broad strategy to direct its actions related to social and environmental concerns. Policies and procedures not covered by national laws or department orders are to be guided by the DPWH environmental and social vision and mission.

1.3.4 International Funding Agencies

Projects that are to be financed by foreign funding agencies must comply with their general guidelines on social and environmental enhancement.

The Japan Bank for International Cooperation (1999) requires the following: a) compliance with environmental pollution standards; b) the natural environment in regard to conservation of endangered species and biodiversity; c) plans for involuntary resettlement must restore living income for project affected people; d) the costs to conserve the environment must be included in the project cost; pollution control equipment and monitoring financing must be covered in operations and maintenance; e) a third party, other than the executing agency is desirable in the interests of objectivity, in the evaluation and monitoring of project-related environmental measures.

A project to be financed by the World Bank requires an environmental assessment (EA) to help ensure its environmental soundness and sustainability. This policy is as follows:

“EA evaluates a project’s potential environmental risks and impacts in its area of influence; examines project alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout the project implementation.” The Bank favors preventive measures over mitigatory or compensatory measures, whenever feasible.

“EA takes into account the natural environment (air, water, and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples, and cultural property); and transboundary and global environmental aspects. … EA is initiated as
early as possible in project processing and is integrated closely with the economic, financial, institutional, social and technical analyses of a proposed project.” (World Bank, 1999)

The Asian Development Bank (1993) promotes environmentally sustainable economic development in its developing member countries. The Bank sets environmental assessment requirements and environmental review procedures to ensure that “appropriate environmental considerations are properly integrated into and monitored in each stage of the project cycle.” Initial Environmental Examinations (IEEs) and Environmental Impact Assessments (EIAs), which are described later, are among the main tools for complying with this requirement.
2 Procedures for EIS Tasks

This section prescribes the procedures to be undertaken in order to obtain an Environmental Compliance Certificate (ECC) for an infrastructure project. This requirement is stated in Presidential Decree (PD) 1586, also known as the Philippine Environmental Impact Assessment (EIA) Law. This law was updated by the Department of Environment and Natural Resources (DENR) through DENR Administrative Order No. 37, series of 1996 (DAO96-37). A procedural manual for complying with this law was also released by the DENR. This procedural manual (referred to here as DPM) is comprehensive and sufficiently detailed, and can provide direction in many of the key activities related to the application for an ECC.

In addition to DAO96-37, the EIA Management Guideline (EIAMG) prepared previously for the DPWH and EIAPO spells out the specific procedures to be followed by the staff upon being assigned the work of obtaining an ECC from the DENR. This document will be referred to extensively, and should be consulted in the administration of the EIA and the conduct of its procedural aspects.

The tasks discussed in this section include those that are either not adequately covered by the materials mentioned above, or the preparation of the substantial or technical portions of documents required under the EIA law.

A flowchart adopted from the Land Acquisition and Right-of-Way manual showing the EIS process is shown in Figure 1. In this flowchart, each activity is identified in the box; parties responsible for the activity are listed underneath each box. Inputs to the activity appear on the left of each box, while outputs are shown on the right.
2.1 Environment Impact Statement Preparation

Objective: To prepare an Environment Impact Statement for submission to the DENR

Lead Person: Study Team Leader

Support:
- Project Manager
- Module Experts
- Technical Reviewer
- Editorial Reviewer

Overview:
The EIAMG contains sufficient information in the management of this task and should be thoroughly consulted together with DAO96-37.

The activity begins at the project identification stage wherein a project design provides sufficient information to proceed with EIS preparation. For the information to be sufficient, the following must be available:
- Type of proposed infrastructure (e.g., road, bridge or dam)
- Scope of work
- Length and width of right of way and other relevant technical information
- Location map of project
- Municipalities to be traversed or affected by the project
- Justification for and benefits from the project.

The Implementing Office (IO) will serve as the project proponent. The IO has the option of selecting who will prepare the EIS. Depending on the availability of funds, the IO may hire a private consulting firm to prepare the EIS. The IO may also ask the EIAPO to prepare the EIS by sending a written request to the EIAPO Project Manager.

If the EIS is prepared by the EIAPO, a project coordinator and a team leader should be selected among its staff. Although one person may be assigned to these roles, they are best given to two people for major projects. The project manager (PM) should look after the budget, disbursement and other administrative concerns in order to allow the team leader (TL) to focus on the technical aspects of the EIA and the integration of the report.

If the EIS is prepared by a private consultant, the document should be done according to the procedures in this manual. The EIAPO will review the document before it is submitted to the DENR.

Procedure:
1. Obtain a description of the project from the IO. The description should contain the following:
- Type of proposed infrastructure (e.g., road, bridge or dam)
- Scope of work Specify project type according to the following:

  Development- construction of a new productive unit
  Rehabilitation - restoration of an existing unit to essentially the same condition as when it was first constructed.
  Reconstruction - construction involving major modifications to the existing unit in terms of design, magnitude and efficiency.
  Improvement - restoration of an existing unit to a condition better than that of the present.

- Length and width of right of way and other relevant technical information
- Location map of project
- Municipalities to be traversed or affected by the project
- Justification for and benefits from the project.

2. Consult DAO96-37, the DPWH-DENR MOA and Annex 1 to confirm that an EIA (and not an IEE or CNC) is required for project, based on the information from Step 1. When in doubt, consult or call the EIA division of the EMB-Central Office.
3. Package the information about the project into a Project Description and prepare a cover letter requesting a scoping meeting. Submit documents to the EMB-DENR Central Office. DENR’s response will be to set a schedule for the First-Level Scoping Meeting. However, it may also refer the project to a regional office for submission as an EIA or IEE. A follow-up call to the DENR may be necessary if a response is not obtained within five working days.
4. Coordinate the First-Level Scoping following Chapter 3 of the DPM and Section 2.5 of this Manual.
5. Coordinate a Second-Level Scoping Meeting following Section 2.6 of this manual.
7. Prepare a detailed project description following the EIA template (Annex 3).
8. Conduct baseline data gathering following the scoping report, DAO96-37 and the EIA template.
   - Go to the EIAPO library to look for relevant data from previous EIAs. Check database for digital maps, reports and other electronic data.
   - See Section 2.7 for guidance on the conduct of a perception survey.
   - See Section 2.9 for guidance on baseline water quality monitoring.
   - See Section 2.10 for guidance on baseline air quality monitoring.
   - See Section 2.11 for guidance on baseline noise monitoring.
9. Conduct consultations and discussions on the proposed project, properly documenting the minutes of all activities. See guidance on the conduct of group discussions (see Section 2.8).
10. Prepare the Impact Assessment section (see Section 2.12)
11. Prepare an Environmental Management Plan (EMP) by revising the standard EMP (Annex 4) into a site- and project-specific plan.
12. Prepare an Environmental Monitoring Plan (EMoP) by revising the standard EMoP (Annex 5) to suit the proposed project.
13. Integrate the EIA using EIA template shown in Annex 3.
14. Submit draft document for technical and editorial review, following Section 5.1 of the SEMS.
15. Revise document into final format and check for completeness using the DENR screening form and scoping checklist. Do not submit the EIA for screening if there are missing sections.
16. Submit one copy of the EIA to DENR for screening if the report is deemed complete.
17. The DENR should respond within three days with an accomplished screening form (Annex 6) indicating whether the EIA may be submitted, or is lacking in certain sections. Revise the report to include the missing requirements, then resubmit. Transmit the revised report with a cover letter identifying the pages where the missing sections have been supplied.
18. After clearing the screening step, prepare required number of copies for DENR review. Submit the report and pay the filing fee. Make sure that a dated proof of acceptance is received from the DENR.
19. Participate in EIS review process (see Section 2.13)
20. Organize and coordinate the public hearing (see Section 2.14).
21. Periodically request an update on the ECC status from the DENR.
22. File the ECC and submit copies to the IO and the EIAPO.
2.2 Initial Environmental Examination Preparation

Objective: To prepare an Initial Environmental Examination (IEE) for submission to the DENR

Lead Person: Study Team Leader

Support: Quality Control Coordinator (for document review)

Overview:
The EIAMG contains sufficient information in the management of this task and should be thoroughly consulted together with DAO96-37.

The activity begins at the project identification stage wherein a project design provides sufficient information to proceed with IEE preparation. For the information to be sufficient, the following must be available:

- Type of proposed infrastructure
- Scope of work
- Length and width of right of way and other relevant technical information
- Location map of project
- Municipalities to be traversed or affected by the project
- Justification for and benefits from the project.

The Implementing Office (IO) will serve as the project proponent. The IO has the option of selecting who will prepare the IEE. Depending on the availability of funds, the IO may hire a private consulting firm to prepare the document. The IO may also ask the EIAPO or EIARO to prepare the IEE by sending a written request to the Project Manager in the case of the EIAPO or the Regional Director in the case of the EIARO. If the IEE is prepared by the EIAPO or EIARO, a study team leader should be selected among its staff.

If the EIS is prepared by a private consultant, the document should be done according to the procedures in this manual. The EIAPO or EIARO will review the document before it is submitted to the DENR.

Procedure:
1. Obtain Project Description from the IO. The description should contain the following:
   - Type of proposed infrastructure
   - Scope of work
   - Length and width of right of way and other relevant technical information
   - Location map of project
   - Municipalities to be traversed or affected by the project
   - Justification for and benefits from the project.
2. Consult DAO96-37, the DPWH-DENR MOA and Annex 1 to confirm that an IEE (and not an IEE checklist or a CNC) is required for project, based on the information from Step 1. When in doubt, call the EIA division of the EMB-Central Office.
3. Complete Enform-I (Annex 7) and submit to the appropriate EMB-DENR regional office. It may be necessary to justify why an IEE and not an EIA is to be conducted, using communications from the DENR central office and the DENR-DPWH MOA. The study team leader will request a meeting with the DENR to discuss the project before the IEE study may proceed. A follow-up call to the DENR may be necessary if a response is not obtained within one week.

4. Prepare the IEE following DAO96-37 and the IEE template. Gather relevant data from previous EIAs and IEEs. Check database for digital maps, reports and other electronic data.

5. Prepare an Environmental Management Plan (EMP) by revising the standard EMP (Annex 4) into a site- and project-specific plan.

6. Write the IEE using IEE template shown in Annex 8.

7. Submit draft document for technical and editorial review, following Section 5.1 of the SEMS.

8. Revise document into final format.

9. Submit required number of copies for DENR review. Pay the required filings fees, and make sure that a dated proof of acceptance is received from the DENR.

10. Call DENR weekly to request ECC status.

11. File the ECC and submit copies to the IO and the EIAPO.
2.3 Initial Environmental Examination Checklist Preparation

Objective: To prepare an Initial Environmental Examination (IEE) checklist for submission to the DENR

Lead Person: Study Team Leader

Overview:
The EIAMG contains sufficient information in the management of this task and should be thoroughly consulted together with DAO96-37.

The activity begins at the project identification stage wherein a project design provides sufficient information to proceed with IEE checklist preparation. For the information to be sufficient, the following must be available:
- Type of proposed infrastructure
- Scope of work
- Length and width of right of way and other relevant technical information
- Location map of project
- Municipalities to be traversed or affected by the project
- Justification for and benefits from the project.

The Implementing Office (IO) will serve as the project proponent. The IO should send a written request to Regional Director to ask the EIARO to prepare the IEE checklist. A study team leader should then be selected among its staff.

Procedure
1. Obtain Project Description from the IO. The description should contain the following:
   - Type of proposed infrastructure
   - Scope of work
   - Length and width of right of way and other relevant technical information
   - Location map of project
   - Municipalities to be traversed or affected by the project
   - Justification for and benefits from the project.
2. Consult the DPWH-DENR MOA and Annex 1 to confirm that an IEE checklist (and not a CNC) is required for project, based on the information from Step 1. When in doubt, call the EIA division of the EMB-Central Office or the region to which the checklist is to be submitted.
3. Complete Enform-1 (Annex 7) and submit to the appropriate EMB-DENR regional office. It may be necessary to justify why an IEE checklist and not an EIA or IEE is to be conducted, using communications from the DENR central office and the DENR-DPWH MOA. The regional office may request a meeting with the DENR to discuss the project. A follow-up call to the DENR may be necessary if a response is not obtained within one week.
4. Prepare the IEE checklist (Annex 9 for roads and bridge projects) and following DAO96-37 and the IEE checklist instructions.
5. Submit required number of copies for DENR review. Pay the required filing fees, and make sure that a dated proof of acceptance is received from the DENR.
6. Call DENR weekly to request ECC status.
7. File the ECC and submit copies to the IO and the EIAPO.
2.4 Application for Certificate of Non-Coverage (CNC)

Objective: To prepare a Certificate of Non-Coverage (CNC) for submission to the DENR

Lead Person: Study Team Leader

Overview:
The activity begins at the project identification stage wherein a project design provides sufficient information to proceed with CNC preparation. For the information to be sufficient, the following must be available:

- Type of proposed infrastructure
- Scope of work
- Length and width of right of way and other relevant technical information
- Location map of project
- Municipalities to be traversed or affected by the project
- Justification for and benefits from the project.

The Implementing Office (IO) will serve as the project proponent. The IO should send a written request to Regional Director to ask the EIARO to secure the CNC. A study team leader should then be selected among its staff.

Procedure:
1. Obtain Project Description from the IO. The description should contain the following:
   - Type of proposed infrastructure
   - Scope of work
   - Length and width of right of way and other relevant technical information
   - Location map of project
   - Municipalities to be traversed or affected by the project
   - Justification for and benefits from the project.
2. Complete Enform-1 (Annex 7) containing a brief description of the project, and a map of the project site.
3. Prepare a cover letter to formally stating the application for a CNC. The letter must justify why the project is not covered by the EIS system. This justification must cite a specific provision of DAO96-37, DPM, or the DPWH-DENR MOA. In addition, it will be worth emphasizing in the letter that the project’s impact on the environment is minimal, and that the project site is not considered a critical area.
4. Submit the application for a CNC to the proper regional office. Pay the required filing fees, and make sure that a dated proof of acceptance or receiving copy of the application is received from the DENR.
5. Call DENR to request CNC status. A response should be obtained within one week.
6. File the CNC and submit copies to the IO and the EIAPO.
2.5 First Level Scoping

Objective: To meet with the DENR and EIA Review Committee (EIARC) to define the coverage of the EIA

Lead Person: EIA Team Leader

Support:
- IO Representative
- EIAPO Staff.

Materials: Project description

Outputs: EIA Scoping Checklist

Procedure:
1. Review Chapter 3 of the DPM describing the steps in the First-level Scoping Meeting.
2. Prepare for the scoping meeting by examining the available details of the project and the critical environmental and social issues surrounding the project site. It may be necessary to visit the site as part of the preparation.
3. Draft a scope of work for discussion during the scoping meeting. Use the First-Level Scoping Checklist (Annex 10) as a guide.
4. During the scoping meeting, the EIA team leader and an IO representative familiar with the project should be present. Another staff member should be assigned to take the minutes of the meeting. DPWH specialists for the critical components of the EIA may also be asked to attend.
5. Attendance during the meeting should be taken. Assign a staffer to take the minutes. It may be necessary to bring food and refreshments to the scoping meeting.
6. The IO representative and study team leader should be prepared to discuss and answer questions about the project and the project site using non-technical language. Exercise tact and courtesy when disagreements arise during the discussions. Avoid making judgements about the impacts of the project at this stage.
7. During the meeting, it is critical to make use of your familiarity with both the project and the project site to make sure that (i) the scope of the study does not cover irrelevant components, and (ii) all important components are included.
8. Finalize the time and data for the Formal (or Second-level) Scoping Meeting.
9. After the meeting, be sure to obtain a copy of the accomplished and duly signed scoping form and attendance sheet.
10. Obtain contact numbers of the EIARC members and the EMB case handler for coordination.
2.6 **Formal (Second-Level) Scoping**

**Objective:** To gather inputs from stakeholders regarding their concerns that should be addressed in the EIA

**Lead Person:** EIA Team Leader

**Support:**
- IO Representative
- EIAPO Staff
- On-site Coordinators
- EIA Review Committee
- DENR Case Handlers.

**Materials and Equipment:**
- Materials for oral presentation
- Handouts
- Audio recorder, video camera, still camera
- 10 to 20 sheets of manila paper, 10 to 20 wide felt-tip markers

**Output:** Scoping Report

**Procedure:**

**Before scoping meeting:**
1. Coordinate with district or regional office to select a venue near the project site. A school auditorium is often an ideal location but other venues satisfying the following criteria may be used:
   - Big enough to comfortably hold the expected number of participants.
   - Equipped with a public address system
   - Enough shade and wall space to display an image from a projector.
   - Accessible to the public but not too noisy
   - With enough chairs and tables, electric fans or airconditioning, and clean toilets
   - Preferably with a standby generator.
2. Identify invitees listed in the DPM. Draft an invitation letter (see Annex 11 for sample) and deliver at least 10 days before the date of the scoping meeting. Make sure that receiving copies of the letters are signed and dated.
3. Follow up and confirm attendance of key invitees three days before the meeting. Select a master of ceremonies, preferably someone experienced who can speak the native language. Select also a key local official to welcome the participants
4. Arrange provisions for food well in advance.
5. Ask key participants if they need transportation to the venue. Arrange transportation to and from site if so requested.
6. Arrange transportation for DENR staff and EIARC members. Set pick-up schedules and locations.
7. Prepare materials for presentation. Two topics will be presented by the DPWH: a 10- to 15-minute overview of the EIA Process to be delivered by an EIA team member, and a 15- to 20-minute presentation on the proposed project to be delivered by the IO representative. Prepare also two handouts on these two topics (one page each). The use of the local language in the materials and presentations is encouraged.

8. Prepare a program for the scoping meeting following the suggested format in DPM. Reproduce an adequate number of the program and handouts for distribution during the scoping meeting. Keep one set of handouts for inclusion in the scoping report.

9. Prepare enough attendance sheets, noting the number of entrances in the venue and the total number of participants.

**One day before scoping meeting:**

1. Arrive at the site to check on the venue and other arrangements. Confirm arrangements for food and transportation.

2. Visit the venue and check the following:
   - Table for EIARC, presentors, DENR staff, and guests of honor
   - Sign-up tables and chairs near entrances
   - Microphones for speakers and the audience
   - Projector and screen
   - Adequate number of chairs for participants
   - General appearance of the venue.

3. Test the sound system, projector, and visibility of the screen from all sides of the venue.

4. Practice the delivery of presentation materials. Edit for length and clarity.

5. Remind keynote speakers and key invitees to confirm their participation.

**During the scoping meeting:**

1. Arrive at the venue at least two hours before the meeting for final preparations.

2. Keep track of participants and the groups they represent as they arrive.

3. The DENR is in charge of the conduct of the scoping meeting and will decide if the meeting has enough participants to proceed.

4. Remind speakers of their time allocations. Agree on a warning signal to indicate when the time is about to run out.

5. Make an audio recording of the proceedings, by video if possible. Take plenty of pictures for documentation. Have someone take written notes as well.

6. Before the presentations, have the master of ceremonies remind the participants that questions will be entertained only during an open forum after all the speakers have completed their presentations.

7. During the open forum, be prepared to answer all questions posed to the DPWH by the moderator. Respond with brief, direct statements. Be calm at all times and avoid confrontation.

8. Because the objective of this meeting is to gather inputs from local stakeholders on the critical environmental and social concerns that should be addressed by the EIA, their participation in the activity is crucial. It is generally recommended that a 30-minute breakout session be conducted wherein the group is divided into smaller groups based on their
common concerns. Ask each group to select a moderator and secretary, and provide each one with one or two whole sheets of manila paper and a large marker. Each group should then engage in a discussion to come up with a list of their concerns that should be addressed in the EIA. This list should be written down in the manila paper for presentation in the large group by a selected member. Each member of the group should sign the sheet.

9. Have each group discuss their output before the entire audience. Make sure that all groups get a chance to present. Keep all signed sheets as part of the documentation.

10. Have an EIA team member summarize the main issues identified by the participants.

After the scoping meeting:
1. Prepare the minutes of the scoping meeting.
2. Prepare a scoping report following the template found in Annex 2.
3. Prepare as many copies of the scoping report as the number of stakeholder groups represented. Attach a letter to be signed by the stakeholder representative approving the scoping report. Send copies of the report to the respective addressees for their approval.
4. Send the scoping report together with the signed stakeholder approval sheets to the DENR.
5. A notice of approval of the Scoping Report from the DENR is usually required before proceeding with the EIS. However, it may be possible to conduct consultations and some data gathering while waiting for the approval if prior notification is made with the case handler.
6. Follow up the approval of the Scoping Report if no response is received one week after its submission.
2.7 Perception Survey

Objective: To obtain the perceptions of individual household stakeholders located in the impact area of a project.

Lead Person: Social Impact Assessment Component Specialist

Support:
- EIA Team Leader
- IO Representative
- EIAPo Staff trained to use the Statistical Package for the Social Sciences (SPSS) or a similar statistical analysis software
- Survey Team consisting of interviewers and a supervisor

Overview:
The survey team may be selected among the staff of a district or regional office who presumably know the local language and are familiar with the community.

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.

The procedure below assumes that all the households within the direct impact area are to be covered in the survey. These households are usually those 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.

Materials and Equipment:
- Perception survey protocol (Annex 12)
- #2 pencils
- Plastic envelopes
- Letters of introduction for interviewers.

Output: Perception Survey Report

Procedure:

Meeting with local officials before conducting the survey:

1. In coordination with the District and/or Regional Office, prepare for a meeting with local government officials in the impact area. Preparatory tasks will include:
   - Drawing up a list of invitees to the meeting
   - Preparing a program and selecting a facilitator
   - Selecting a venue
   - Arranging food and audiovisual equipment, if needed
   - Preparing and sending out invitations.
2. Send out the invitations at least two weeks before the planned meeting.
3. Two days prior to the meeting, check to see that all arrangements have been made as agreed upon. Confirm the number of attendees.
4. On the day of the meeting itself, arrive at the venue at least two hours earlier to oversee the final preparations.
5. Convene the meeting with local officials to inform them about the objectives and expected activities of the survey, and to obtain their cooperation and assistance in the following ways:
   - Disseminate information to target households about the survey
   - Provide access to the barangay
   - Provide security to the survey team.
6. Advise the local officials when the survey will be conducted. Choose a date when interviewees are most likely to be available.

Training the Survey Team:
1. Determine who will compose the survey team, specifically the interviewers and the field supervisor.
2. Conduct a training seminar for interviewers and their supervisor. Provide an interviewer’s kit consisting of a plastic envelope, copies of the survey protocol, and pencils. Discuss the survey protocol, the tasks of interviewers and supervisors, guidelines and interview tips (see below), and the survey procedure.
3. At the end of the training, specify the particular areas of assignment of each survey team member. Provide everyone with an introduction letter to the barangay officials in their assigned areas, and the schedule for the activity.

During the survey (Instructions to Interviewers):
1. Read the interviewing tips listed below.
2. Be onsite early on the scheduled date for the survey.
3. Bearing your introduction letters, coordinate with the local officials in your assigned areas.
4. Select an interviewee and conduct the interview according to the following procedure:
   a. Knock on the door, then identify yourself and explain your purpose to whomever answers the door.
   b. Ask politely for the household head (either the father or mother). In his or her absence, talk to eldest adult family member. If no adults are available, move to the next house along the route until a qualified person is found.
   c. Explain the purpose of the survey, then ask whether the household head is willing to be interviewed. If the person is unwilling to be interviewed, ask if another adult is willing. If no one from the household wants to be interviewed, move to the next house.
   d. Ask the questions exactly as they are phrased and in the sequence that they appear in the survey protocol.
   e. Before ending the interview, check whether all the questions in the survey protocol have been answered.
   f. Thank the interviewee and ask if you may return in case there is need for additional information.
5. Submit completed protocols to the supervisor.
During the survey (Instructions to Supervisors):
1. Make a random check of the veracity of the interview responses obtained by the interviewers. Take at least one completed protocol per interviewer and visit the interviewee named in the protocol. Observing the same procedures for interviewing, select questions in the protocol at random, and ask these questions again. Compare the responses gathered with those entered by the interviewer.
2. At the end of each day of the survey, edit the completed protocols. Editing means ensuring that all items have been answered (including NAPs and NAs), and that the responses are properly entered and understandable.
3. Periodically report to the EIA Team Leader and the Social Impact Assessment Component Specialist on the progress of the survey work.

After conducting the survey (Instructions to the Survey Team)
1. Bring all completed survey protocols to the District Office and complete the editing of the protocols.
2. Turn the edited protocols over to the EIAPO staff trained in the use of the Statistical Package for the Social Sciences (SPSS) for encoding, collating and tabulating the survey data.

Processing and analyzing the survey results:
1. Supervise the processing, tabulation and analysis of the data using SPSS or other software.
2. Prepare the Perception Survey Report, which should discuss findings grouped under the following major headings:
   a. Respondents’ Profile
   b. Household Characteristics
   c. Perceptions regarding the environment in general
   d. Perceptions towards the DPWH project at hand
   e. Social acceptability of the project
3. Discuss the findings of the Perception Survey with the IO, EIAPO, EIARO and the District Office. Draw out the implications of the findings for making the DPWH project socially acceptable. Recommend IEC strategies that could help achieve this end.

Tips for Interviewers and Supervisors:
1. Prepare for the interview by reading and reviewing the protocol. Take note of the special instructions (in caps) found in the protocol. Familiarity with the questions in the protocol will make both you and the respondent feel more relaxed about the interview.
2. Conduct the interview such that the interviewee’s answers remain private. Other people hearing the interview may affect the responses.
3. If you notice that the interviewee is not at ease, talk about something else until he or she feels comfortable enough to respond to the interview.
4. Close-ended items call for ticking off the answers (called fixed alternatives) in the protocol as they are given by the interviewee. Some items may require more than one answer (or multiple responses), so tick off all answers given.
5. Open-ended items, which are followed by blanks, do not call for specific responses. You may sometimes need to probe—e.g., by asking. If there is any answer given that does not fall under any one of the fixed alternatives, place this under the blank space after the word “Others.”
6. Use probing questions when you get superficial answers. Some useful probing questions are:
   - “Bakit ninyo nasabi iyan?”
   - “May maidagdag pa po ba kayo?”
   - “Ano po ang ibig ninyong sabihin?”
   - “Ano pa po ang masasabi ninyo?”

7. Write down responses to open-ended questions and other important remarks verbatim or exactly as they are stated. Use the same language and do not summarize or paraphrase.

8. Try to fill out all the items in the survey protocol. Use gentle persuasion to obtain a response if the respondent hesitates or refuses, but do not push. If no response is given, write NA (no answer) on the blank. If an item is not applicable, write NAP.
3.8 **Focus Group Discussion (FGD)**

*Objective:* To obtain the perceptions and sentiments of stakeholder representatives groups in the project area.

*Lead Person:* Social Impact Assessment Component Specialist

*Support:*
- EIA Team Leader
- IO Representative
- Regional or District personnel knowledgeable in the local language to act as FGD Facilitator
- EIAPPO staff members to serve as FGD Documentors

*Materials and Equipment:*
- FGD Guide (see sample questions at the end of this section)
- Tape recorder and tapes
- Still or video camera
- Manila paper
- Board for posting
- Marking pens and pencils
- Registration sheet

*Output:* FGD Report with photo/video documentation

*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.

*Procedure:*

**Preparing for the FGD:**

1. Together with Regional/District personnel:
   - 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.
   - Select a date and venue.
2. Prepare and send out invitations to the selected stakeholder group representatives at least two weeks before the FGD.
3. Make arrangements for food and equipment.
4. Meet with the FGD team (Facilitator and Documentors) for orientation on the objectives, process/procedures, FGD Guide, and functions of the team members.
5. If necessary, translate the FGD questions (refer to FGD Guide) into the local language of the project area.
6. Cut each Manila paper into three. On each piece, write one question or set of questions from the FGD guide.
7. Two days before the FGD, check whether the arrangements are in order and confirm the FGD participants’ attendance.
8. On the day of the FGD, come to the venue two hours earlier to make a last-minute check on arrangements made.
9. Immediately before the FGD is conducted, ask participants to register their names, designations, organization they represent and their signatures.

During the FGD (Instructions to the FGD Team):

1. A facilitator is expected to know the questions in the FGD instrument by heart. He/she should have ready the pieces of Manila paper containing each question or question set.
2. The Facilitator and two documentors should place themselves approximately equidistant from each other to form a triangle within the group. One documentor may move around to record the session and to take pictures or video shots of parts of the proceedings. The other documentor takes notes on the discussion and records observations on the group’s interaction.
3. The SIA Component Specialist oversees the FGD activity and helps the Facilitator keep the discussion on track. He or she may also ask probing or follow up questions as needed.

Actual Conduct of the FGD (For Facilitator):

1. Welcome the participants and ask everyone to introduce themselves. Make small talk to establish rapport and set the group at ease.
2. Explain why the FGD is being held, emphasizing the importance of their participation. Allow participants to ask a few questions on the project.
3. Start and guide the discussion on a topic by posting the appropriate question on the board. Follow the FGD guide, but change the sequence of the questions as needed.
4. Probe and follow-up the participants’ responses with short questions that may not be among those in the instrument. However, make sure the discussion stays on the same topic.
5. See to it that all participants are given equal chance to speak and share their views. Ensure that every question/topic gets an equal amount of discussion time.
6. End on time (no more than three hours after starting). Thank the participants for their involvement.

After the FGD:

1. Ensure that the FGD transcripts, photo/video documentation, and observations are completed within two weeks after the meeting. Provide copies to every member of the FGD Team.
2. Meet the FGD Team to discuss and analyze the data from the transcripts and observations. Draw out the implications of the findings for making the DPWH project socially acceptable. Recommend EMP measures and IEC strategies that could help achieve this end.

Sample FGD Guide Questions:

1. What have you heard about the project? Who were your sources of information?
2. In what specific ways will the project be advantageous or beneficial to the various stakeholders in the project area?
3. In your opinion, who or what group will benefit most from the project?
4. In what specific ways will the project be disadvantageous or non-beneficial?
5. Who or what group will be most disadvantaged by the project?
6. In what ways can these disadvantages be mitigated?
7. In what ways can benefits from the project be enhanced?
8. Would you support the project? Why or why not?
3.9 Baseline Water Quality Monitoring

Objective: To determine the baseline quality of water bodies within a project’s impact area

Responsible Persons: EIAPO, IO, EIARO or district staff trained in water quality monitoring

Materials and Equipment:
- Portable water quality analyzer (for temperature, pH, conductivity, turbidity, dissolved oxygen and salinity)
- Water sampling bottles (of various types provided by laboratory)
- Rinsing bottle and triple distilled water
- Vicinity map
- Field notebook
- Felt-tip permanent marker for labeling
- Safety equipment (gloves, wading boots, life vests, as appropriate)
- Cooler with ice for storing samples
- Camera

Output: Water quality measurements (to be included in chapter on baseline environmental conditions in the EIA)

Procedure:

Before leaving for field sampling:
1. Check water quality analyzer for operating condition, battery power level, and compliance with calibration schedules. Check freshness and sufficiency of calibrating solutions.
2. Identify water quality parameters to be measured based on the scoping report. If such instruction is not given, measure the following parameters:
   - Turbidity
   - Salinity
   - Conductivity
   - Dissolved oxygen
   - Temperature
   - pH
   - Total dissolved solids
   - Oil & grease
   - Phenols
   - BOD and COD
   - Heavy metals (optional)
   - Coliform count (groundwater and drinking water only)
3. Expect to collect about three samples per major body of water within the impact area.
4. Obtain water quality sampling bottles from a DENR-recognized laboratory. Sampling bottles vary depending on the parameter to be analyzed; some parameters will call for bottles containing chemical preservatives. Check presence of labels on each bottle. To ensure that enough sampling bottles will be available, add 10 percent to expected number.
5. Ensure bottles are stored in sturdy coolers, which are usually provided by the laboratory. Check chain-of-custody (COC) forms (Annex 13) that should accompany sampling bottles.

At sampling station:
1. Coordinate with local officials before sampling. If needed, hire residents as guides, porters or field assistants. Instruct assistants on the purpose of the sampling, personal safety, and caring for the equipment. For their safety and to preserve data quality, minimize their contact with samples and sampling materials. Provide field assistants with safety gear, food and drinks, and fair compensation.
2. There are no hard rules in choosing sampling points in a target body of water. However, consider taking samples upstream and downstream of the impact area. Sample from a point near the bank or shore on the same side as the project where water appears well-mixed. Composite samples made up of three or more samples along a cross-section of a river may also be taken. Waders, a boat or a sampling pole may be used to reach the preferred locations.
3. Sketch sampling locations in the field notebook. Take pictures of the sampling activity.
4. Calibrate water quality analyzer according to method and schedule recommended by manufacturer.
5. If several samples are to be taken at a station, collect or analyze the relatively cleaner water first.
6. Operate water quality analyzer following manufacturer’s directions. Rinse probes with distilled water before using. It is sometimes better to sample a water body by collecting some water in a thoroughly rinsed beaker or similar vessel and immersing the probe into the vessel rather than directly into the water body. However, make sure that readings of the water in the vessel are taken quickly after collection. Rinse probes after each sample.
7. Fill a bottle by placing the mouth against the flow, immersing slowly about 20 cm below the surface.
8. Add the required preservative, seal, label and store the sampling bottle in the cooler.
9. Log the station location, number of samples, sample labels, environmental conditions, observations and other information in the field notebook.
10. Check storage condition of samples at the end of each sampling day, repacking or replacing ice as necessary.

After sampling:
1. Check samples before traveling back from field, repacking or replacing ice as necessary. Check again before sending samples back to the laboratory.
2. Samples should be shipped to the laboratory as soon as possible and within the prescribed holding time. Fill out and submit COC forms.
3. Wait for laboratory report, periodically following up as necessary. Keep all laboratory reports for inclusion in the EIA.
5. Submit report to water quality impact assessment team leader for inclusion of its results in the EIA.
### 2.10 Baseline Ambient Air Quality Monitoring

**Objective:** To determine baseline levels of selected criteria pollutants (total suspended particulates, sulfur dioxide and nitrogen dioxide)

**Responsible Persons:** EIAPO, IO, EIARO, or district staff trained in air quality monitoring

**Materials and Equipment:**
- High-volume sampler
- Pre-weighed particulate filters
- Gas analyzer
- Absorbing solutions and sampling reagents
- Portable power generator with 20-m (minimum) extension cord
- Fuel for generator
- Portable spectrophotometer (for analysis on field)
- Vicinity map
- GPS or compass
- Outdoor thermometer
- Barometer (for sampling at high elevations)
- Rinsing bottle and triple distilled water
- Field notebook
- Felt-tip permanent marker for labeling
- Non-powdered latex glove and tweezer
- Safety equipment (hard hats, reflectorized vests, traffic warning signs, as appropriate)
- Cooler with ice for storing chemicals
- Camera

**Optional:** Portable anemometer and wind vane with mast

**Output:** Ambient air quality measurements, air quality monitoring report

**Procedure:**

**Before leaving for field sampling:**

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 the 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 the 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 accomplished.

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.

During field sampling:

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 the number and general location of the sampling stations based on the scoping report. If no instructions are found in the scoping report, the following guide may be used to select the general locations:
   - Road – Divide the length of the road project into four to six segments. In each segment, select a station near a population center.
   - Bridge – At each end of the bridge, select two stations within 100 meters for a total of four stations.
   - Dam or building (area source) – Surround the project site with four to six stations found within 100 meters from the boundary.

3. Depending on the scoping report, at least one station will be for 24-hour sampling, the rest for 1-hour sampling. Choose the station near a large population with the best exposure, and one that can be used for future monitoring activities.

4. Notify and obtain permission from property owners and local authorities before sampling.

5. 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.

6. Set up instruments and generator in safe, stable and secure positions. Put on or install safety equipment as necessary.

7. Using gloved hand or tweezers, place filter on HVS following equipment manufacturer’s specification. Inspect filter for tears and holes. Check filter placement to ensure no leaks along the sides.

8. 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.

9. Inspect wires, tubing and connections in all equipment in preparation for operation.

10. 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 rate every four hours or make sure flow rate recorder is operating.

11. 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. Indicate sampling position in vicinity map.

12. 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 (Annex 16) to estimate wind speed and visual indicators (clouds, smoke plumes) to find wind direction. Record stability class using Pasquill’s criteria (Annex 16). 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.

During end of sampling:
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, 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.

Reminders for 24-hour sampling:
1. 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.
2. Train the field assistants to read and record flow rates and weather conditions according to schedule. However, check their work regularly.

After sampling:
1. Send filters and reagents back to laboratory for analysis. Ensure that samples are properly labeled, and that COC forms are properly accomplished and returned to laboratory. Provide lab with flow rates and meteorological data for calculation of concentrations.
2. Clean equipment and prepare for next sampling.
3. Wait for laboratory report, periodically following up as necessary. Check lab calculations. Keep all laboratory reports for inclusion in the EIA.
5. Submit report to air quality impact assessment team leader for inclusion of its results in the EIA.

Criteria for Air Quality Sampling Site Selection:

1. As a general rule, 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 roofdecks often serve as good sampling positions.
2. 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.
3. Do not place a sampler indoors or under obstructions like overhangs and tree canopies.
4. There should be at least 270 degrees unrestricted airflow around the sampler.
5. The sampler intake line should be about 2 to 15 meters above the ground.
6. To avoid windblown dust from the ground, choose a location with good ground surface cover, such as short grasses.
7. Where possible, there should be a clear line-of-sight between the project site and the station.

Additional Reference:
2.11 Baseline Noise Monitoring

Objective: To determine baseline noise levels

Responsible Persons: EIAPO, IO, EIARO, or district staff trained in noise monitoring

Materials:
- Vicinity map
- GPS or compass
- Noise meter with calibration kit
- Data Sheet for Noise Monitoring (one sheet per reading)

Optional:
- Wind vane and anemometer with mast
- Outdoor thermometer
- Wet-bulb thermometer or hygrometer

Output: Noise measurements (to be included in chapter on baseline environmental conditions in the EIA)

Procedure:
1. Choose a noise monitoring station close to the ambient air quality sampling station
2. Set up weather instruments and take readings of wind, temperature and humidity. Record data in Noise Monitoring Data Sheet (Annex 19). Indicate sampling location in vicinity map.
3. Calibrate noise meter as necessary.
4. Set noise meter to record “A” weighted frequencies, and place setting on “Slow.”
5. With microphone facing the general direction of the project activity, take 50 successive instantaneous readings at 10-second intervals. Ignore values that may occur between readings. Tally each reading in the proper row of the Data Sheet.
6. After all 50 readings have been taken and tallied, count the number of occurrences of each noise reading and write down the total in second-to-last column of the Data Sheet.
7. After counting the total readings in each row, calculate the cumulative frequency and write down the total in the last column.
8. Take the average of the fifth and sixth highest reading and write down the result in the box labeled $L_{10}$. Do the same for $L_{50}$ (average of the 25th and 26th highest reading) and $L_{90}$ (average of the 45th and 46th highest reading).
9. For 24-hour sampling, use same procedure to obtain one set ($L_{10}$, $L_{50}$ and $L_{90}$) of noise measurements for each of the four monitoring periods: Daytime (0700H-1700H), Evening (1700H-2100H), Nighttime (2100H-0500H), and Morning (0500H-0700H). Each noise measurement should be determined from 50 readings using the procedure described above.
10. Prepare a table of results for inclusion in the Air Quality Monitoring Report. Follow the section on noise found in the Air Quality Monitoring Template.
2.12 Impact Assessment

Objective: To Prepare the Impact Assessment Section of the EIA

Lead Person: EIA Team Leader

Support: Component Specialists

Overview: The content of the impact assessment section is clearly too complex to discuss here. This manual can therefore only provide general guidance on the environmental impacts typically associated with infrastructure development.

Pointers:
1. Impact assessment should discuss separately the following stages:
   - Preconstruction – includes all preparatory or exploratory activities done onsite prior to any earthmoving or construction work
   - Construction – should include all ground clearing, earthmoving, quarrying, and structural work; equipment maintenance; materials delivery; movement of vehicles and equipment; shelter, sanitation and support for the labor force;
   - Operation – Traffic, maintenance work on the structure
   - Abandonment. – Removal of the structure, site restoration
2. The discussion should characterize impact using the following:
   - Activity causing the impact – e.g., earthmoving, pile driving
   - Nature of the impact – e.g., dust generation, habitat disturbance
   - Severity or intensity – no impact, minimal (naturally reversible), moderately significant (reversible with some mitigation), highly significant (requires specific mitigation)
   - Length of time or periodicity – short-term (duration of construction) or long-term (lifetime of project or permanent); continuous or intermittent
   - Affected receptors – place, group, industry, or sector
   - Probability or contingency - unknown, unlikely, possible (even chance of occurring), contingent (likelihood dependent on other events), or certain
   - Built-in mitigation measures.
3. Besides noise and air quality, impacts on should be expressed in numerical terms whenever possible, e.g., hectares of land, numbers of people, pesos worth of crops.
4. A list of typical impacts is shown below. This list is by no means exhaustive. The EIA team leader should go through the list and make sure that component specialists discuss those that apply to the project.
   - Noise
   - Dust from earthmoving
   - Air pollution from vehicles and equipment
   - Pollution of surface waters
   - Pollution of groundwater from oil spills
   - Environmental contamination from hazardous materials
   - Erosion
   - Siltation and sedimentation
- Loss of vegetation
- Loss or degradation of habitats
- Disturbance to wildlife
- Generation of construction-related jobs
- Generation of livelihood opportunities
- Disturbance to traffic during construction
- Improvement of traffic during operations
- Displacement from homes and livelihood
- Stress on social services
- Peace and order disruption
- Disturbance to cultural, historical, scientific or natural resources
- Disturbance to tourism activities during construction
- Improvement of delivery of social services during operations
- Safety risks to the public from excavations and structures
- Hazards from structures during natural disasters.

5. Additional guidance on social impact assessment may be gathered from the EIAPO website.
3.13 EIS Review

Objective: To participate in the DENR and EIA Review Committee (EIARC) meetings

Lead Person: EIA Team Leader

Support:
- IO Representative
- EIA Team

Materials: EIS and project documents

Output: Responses to comments and questions by the EIARC

Procedure:
1. Review Chapter 11 of the DPM describing the EIA review process. Follow the specific procedures discussed in that section.
2. Prepare for the review by convening the EIA team to discuss potential questions by the EIARC, based on critical issues concerning the project. Draft answers to these issues based on the information gathered and presented in the EIA. Be ready to discuss the project description, data gathering procedure, impact assessment methodologies, and EMP design.
3. During the review committee meeting, the EIA team leader, an IO representative familiar with the project, and EIA team members should be present. Another staff member should be assigned to take the minutes of the meeting. RROW specialists may also be asked to attend.
4. Attendance during the meeting should be taken. Arrange to have food and refreshments served during the meeting.
5. Be prepared to discuss the project and the EIA using non-technical language. Direct questions to a member of the team most qualified to respond to them. Exercise tact and courtesy at all times, particularly when disagreements arise during the discussions.
6. Avoid justifying impacts from the project using the benefits expected from it. Instead, be prepared to make firm commitments about implementing the project in an environmentally and socially acceptable manner using the methods presented in the EMP. Describe the mechanisms that will guarantee the implementation of the EMP. Make sure, however, that all commitments are consistent with DPWH policies and the project budget and design.
7. Before the end of the EIARC meeting, the DENR case handler will begin drafting a request for additional information (AI) based on the comments and questions raised by the EIARC. Ask to see a copy of the draft, and check each item to make sure that only those items that have not been fully answered appear in this draft. A shorter AI request means less work in preparing a response. In addition, be sure to be clear about the information or response requested in the AI before the meeting is adjourned.
8. Responses to the AI should be submitted as a separate report. Each response to an item should be direct and specific, and all items must be satisfactorily addressed. The response to the AI should be prepared and submitted as soon as possible in order not to delay the review process.
9. Set a schedule of the public hearing with the EIARC.
3.14 Public Hearing

Objective: To conduct a hearing on the proposed project in order to allow stakeholders to comment and ask questions about the project and EIA results.

Lead Person: EIA Team Leader

Support:
- IO Representative
- EIAPO Staff
- On-site Coordinators
- EIA Review Committee
- DENR Case Handlers.

Materials and Equipment
- Materials for oral presentation
- Handouts
- Tape recorder, video camera, still camera

Outputs: Public Hearing minutes

Procedure:

Before the Public Hearing:
1. Read Chapter 7 (on Public Participation) of the DPM regarding the conduct of the public hearing. Follow the specific procedure discussed in that section.
2. Coordinate with district or regional office to select a venue for the hearing near the project site using the same criteria used to select the site of the scoping meeting.
3. Request for a format of an announcement for the public hearing from the DENR case handler. Prepare the announcement, then submit it to the EMB for approval. After a written approval is obtained, post the announcement in a newspaper of general circulation 30 days before the actual date of the hearing. Post the announcement again seven days after the first announcement.
4. Submit one copy of the EIA to the PENRO or CENRO holding jurisdiction over the project site.
5. Identify invitees to the hearing based on the list in the DPM. Send an invitation letter (see Annex 11 for sample) and deliver at least 10 days before the date of the hearing. Make sure that receiving copies of the letters are signed and dated. Follow up and confirm attendance of key invitees three days before the meeting.
6. Announce the public hearing through radio ads, flyers, and posters in public places.
7. Select a master of ceremonies, preferably someone experienced who can speak the native language. Select also a key local official to welcome the participants.
8. Arrange provisions for food well in advance.
9. Ask key participants if they need transportation to the venue. Arrange transportation to and from site if so requested.
10. Arrange transportation for DENR staff and EIARC members. Set pick-up schedules and locations.

11. Prepare materials for presentation. Two topics will be presented by the DPWH: an 10- to 15-minute presentation on the proposed project to be delivered by the IO, and a 15- to 20 minute presentation of the EIA findings and the EMP. Include a discussion of (i) the issues identified by the participants of the scoping meeting, (ii) what the EIA found regarding these issues, and (iii) what specific measures are designed to address them. Prepare and distribute handouts on these topics. The use of the local language in the materials and presentations is encouraged.

12. Prepare a program for the public hearing following the suggested format in DPM. Reproduce an adequate number of the program and handouts for distribution during the meeting.

13. Prepare enough attendance sheets, noting the number of entrances in the venue and the total number of participants.

One day before the public hearing:

1. Arrive at the site to check on the venue and other arrangements. Confirm arrangements for food and transportation.

2. Visit the venue and check the following:
   - Table for EIARC, presentors, DENR staff, and guests of honor
   - Sign-up tables and chairs near entrances
   - Microphones for speakers and the audience
   - Projector and screen
   - Adequate number of chairs for participants
   - General appearance of the venue.

3. Test the sound system, projector, and visibility of the screen from all sides of the venue.

4. Practice the delivery of presentation materials. Edit for length and clarity.

5. Remind keynote speakers and key invitees to confirm their participation.

During the scoping meeting:

1. Arrive at the venue at least two hours before the meeting for final preparations.

2. Keep track of participants and the groups they represent as they arrive.

3. The DENR is in charge of the conduct of the public hearing and will decide if the meeting has enough participants to proceed.

4. Remind speakers of their time allocations. Agree on a warning signal to indicate when the time is about to run out.

5. Make an audio recording of the proceedings, by video if possible. Take plenty of pictures for documentation. Have someone take written notes as well.

6. Before the presentations, have the master of ceremonies remind the participants that questions will be entertained only during an open forum after all the speakers have completed their presentations.

7. During the open forum, be prepared to answer all questions posed to the DPWH by the moderator. Respond with brief, direct statements. Be calm at all times and avoid confrontation.

After the public hearing:

1. Prepare the minutes of the public hearing.
2. Have the minutes of the hearing transcribed for submission to the EMB.
3 Procedures for Post-ECC Tasks

The tasks discussed below are those that begin after an ECC for a project has been issued. Much of the work is defined by the Philippine EIS Law and compliance with national environmental quality standards. The output of these tasks is critical in demonstrating the DPWH’s commitment to environmental protection and social enhancement.

It is the responsibility of the Implementing Office (IO) to comply with the conditions of the ECC. The EIAPO is expected to provide guidance, technical assistance and training to the IO if needed. Compliance with the conditions of the ECC shall be monitored by the EIAPO and the EIARO. Any necessary logistics for conduct of monitoring and ECC compliance shall be provided by the IO.
3.1 ECC Monitoring

Objective: To ensure that a project complies with the provisions of its Environmental Compliance Certificate

Lead Person: Team Leader

Overview: The Team Leader need not be the same person who handled the EIA for the project, but is someone who will be responsible for addressing all its subsequent environmental compliance requirements. The person should be from the EIAP or the EIARO directly supervising the project. The person is also expected to be monitoring the ECCs of more than one project.

Procedure:
1. Make several copies of the ECC and keep a copy within easy reach.
2. Prepare an overall calendar containing milestones and deadlines for all projects whose ECCs are being monitored. Calendar may cover several years, depending on the project. Post the calendar in a conspicuous location. Check this calendar daily.
3. For each provision, identify the parties responsible for compliance, the schedule for compliance, and the proof of compliance to be submitted to the DENR. Call or meet with the DENR case handler for clarification if needed. Document the discussion with the case handler.
4. Prepare a project ECC monitoring calendar indicating milestones and deadlines for complying with ECC provisions. Calendar may cover several years, depending on the ECC. Mark key dates indicated in ECC calendar in the overall calendar.
5. Complying with certain provisions, such as the submission of additional studies, should be broken down into several smaller activities. Set a starting and completion time for each activity and indicate this schedule in the ECC monitoring calendar.
6. Make sure that periodic activities, such as air and water quality monitoring, are also indicated in the calendar.
7. Prepare a schedule of reminders to responsible parties based on ECC calendar.
8. Ensure the implementation of each ECC condition according to schedule. Use the ECC Compliance Monitoring Report (Annex 20) issued by the EMB as a guide.
9. Send an official letter with a dated receiving copy to the DENR each time an ECC provision is completed. Indicate the specific provision and the date of completion.
10. In cases when a provision cannot be complied with in time, notify the DENR well in advance (preferably at least two weeks ahead) of the delay. Specify the reason for the delay, being careful not to provide unnecessary detail. Rather than request an extension, provide a reasonable estimate of the expected date of completion. Send assurances that such delay causes no harm to the environment or the community.
3.2 Organizing the Multipartite Monitoring Team

Objective: To organize a Multipartite Monitoring Team consistent with the objectives of DAO96-37

Lead Person: District Engineer (to be assigned by Regional Director)

Support:
- IO for logistics
- EIAPO and EIARO for technical assistance.

Overview:
A Multi-partite Monitoring Team (MMT) is a group of stakeholder representatives tasked to monitor a project in support of the DENR’s compliance monitoring. According to DAO96-37, MMTs are designed to “encourage public participation, greater stakeholders’ vigilance and provide appropriate check-and-balance mechanisms in the monitoring of project implementation.”

The functions as well as the criteria and guidelines for the creation of an MMT are discussed in detail in DPM and should be understood thoroughly by the Lead Person.

Procedure:
1. Prior to project construction, coordinate with the Provincial Environment and Natural Resources Officer (PENRO) or Community Environment and Natural Resources Officer (CENRO) to identify an LGU representative with whom to form an MMT Executive Committee (Execom). PENROs generally head MMTs for major projects encompassing several municipalities; CENROs chair smaller projects. The MMT Execom shall then take the lead in organizing the MMT.

2. Other representatives to the MMT should be selected from among the following local stakeholder groups:
   - The health sector (e.g., a Department of Health official)
   - An environmental NGO or PO
   - An indigenous community (if applicable)
   - A college or university.

Other stakeholder groups may also be invited, depending on how the project relates to their concerns. Members should also be technically competent, credible, committed and available for duty in the MMT.

3. Attend an MMT meeting to finalize an annual work and financial plan based on the environmental monitoring plan found in the EIS, and the approved Memorandum of Agreement based on the ECC conditions. It is critical to remind the MMT that the DPWH is not authorized to set aside an Environmental Monitoring Fund (from which honoraria may be drawn), but the agency will shoulder the costs of travel, food and other monitoring expenses.

4. MMTs have their own monitoring schedules and procedures based on DENR requirements. However, its members may be invited to observe monitoring exercises by the DPWH.
3.3 Water Monitoring

Objective: To determine the impact of construction operations on the quality of nearby water bodies

Responsible Persons: EIAPO, IO, EIARO or district staff trained in water quality monitoring

Materials and Equipment:

- Portable water quality analyzer (for temperature, pH, conductivity, turbidity, dissolved oxygen and salinity)
- Water sampling bottles (of various types provided by laboratory)
- Rinsing bottle and triple distilled water
- Vicinity map
- Field notebook
- Felt-tip permanent marker for labeling
- Safety equipment (gloves, wading boots, life vests, as appropriate)
- Cooler with ice for storing samples
- Camera

Output: Water Quality Sampling Report

Procedure:

Before leaving for field sampling:
1. Check water quality analyzer for operating condition, battery power level, and compliance with calibration schedules. Check freshness and sufficiency of calibrating solutions.
2. Identify water quality parameters to be measured based on the EMP.
3. Obtain water quality sampling bottles from a DENR-recognized laboratory. Sampling bottles vary depending on the parameter to be analyzed; some parameters will call for bottles containing chemical preservatives. Check presence of labels on each bottle.
4. Ensure bottles are stored in sturdy coolers, which are usually provided by the laboratory. Check chain-of-custody (COC) forms (Annex 13) that should accompany sampling bottles.

At sampling station:
1. Coordinate with local officials before sampling. If needed, hire residents as guides, porters or field assistants. Instruct assistants on the purpose of the sampling, personal safety, and caring for the equipment. For their safety and to preserve data quality, minimize their contact with samples and sampling materials. Provide field assistants with safety gear, food and drinks, and fair compensation.
2. Inspect sampling station, ensuring that station is identical to the location specified in the environmental monitoring plan or sampling map and is consistent with objectives of monitoring.
3. Calibrate water quality analyzer according to method and schedule recommended by manufacturer.
4. If several samples are to be taken at a station, collect or analyze the relatively cleaner water first.
5. Operate water quality analyzer following manufacturer’s directions. Rinse probes with distilled water before using. It is sometimes better to sample a water body by collecting some water in a thoroughly rinsed beaker or similar vessel and immersing the probe into the vessel rather than directly into the water body. However, make sure that readings of the water in the vessel are taken quickly after collection. Rinse probes after each sample.
6. Collect water samples from a well-mixed location as far away from the riverbank as practicable. Waders, a boat or a sampling pole may be used to reach the preferred location.
7. Fill a bottle by placing the mouth against the flow, immersing slowly about 20 cm below the surface.
8. Add the required preservative, seal, label and store the sampling bottle in the cooler.
9. Log the station location, coordinates, number of samples, sample labels, environmental conditions, observations and other information in the field notebook.
10. Locate the stations in the vicinity map.
11. Check storage condition of samples at the end of each sampling day, repacking or replacing ice as necessary.

After sampling:
1. Check samples before traveling back from field, repacking or replacing ice as necessary. Check again before sending samples back to the laboratory.
2. Samples should be shipped to the laboratory as soon as possible and within the prescribed holding time. Fill out and submit COC forms.
3. Wait for laboratory report, periodically following up as necessary. Keep all laboratory reports for inclusion in the EIA.

Additional Reference on Water Quality Sampling:
3.4 Air Monitoring

Objective: To determine the impact of construction operations on concentrations of dust and vehicular emissions (sulfur dioxide and nitrogen dioxide)

Responsible Persons: EIAPO, IO, EIARO or district staff trained in air quality monitoring

Materials and Equipment:
- High-volume sampler
- Pre-weighed particulate filters
- Gas analyzer
- Absorbing solutions and sampling reagents
- Portable power generator with 20-m (minimum) extension cord
- Fuel for generator
- Portable spectrophotometer (for analysis on field)
- Vicinity map
- GPS or compass
- Outdoor thermometer
- Barometer (for sampling at high elevations)
- Rinsing bottle and triple distilled water
- Field notebook
- Felt-tip permanent marker for labeling
- Non-powdered latex glove and tweezer
- Safety equipment (hard hats, reflectorized vests, traffic warning signs, as appropriate)
- Cooler with ice for storing chemicals
- Camera

Optional: Portable anemometer and wind vane with mast

Output: Ambient Air Quality Sampling Report

Procedure:

Before leaving for field sampling:
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.

During field sampling:

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.

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.

4. Set up instruments and generator in safe, stable and secure positions. Put on or install safety equipment as necessary.

5. Using gloved hand or tweezers, place filter on HVS following equipment manufacturer’s specification. Inspect filter for tears and holes. Check filter placement to ensure no leaks along the sides.

6. 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.

7. Inspect wires, tubing and connections in all equipment in preparation for operation.

8. 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 rate every four hours or make sure flow rate recorder is operating.

9. 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.

10. 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 (Annex 16) to estimate wind speed and visual indicators (clouds, smoke plumes) to find wind direction. Record stability class using Pasquill’s criteria (Annex 16). 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.
During end of sampling:
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:
1. 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.
2. Train the field assistants to read and record flow rates and weather conditions according to schedule. However, check their work regularly.

After sampling:
1. Send filters and reagents back to laboratory for analysis. Ensure that samples are properly labeled, and that COC forms are properly accomplished and returned to laboratory. Provide lab with flow rates and meteorological data for calculation of concentrations.
2. Clean equipment and prepare for next sampling.
3. Wait for laboratory report, periodically following up as necessary. Check lab calculations. Keep all laboratory reports for inclusion in the EIA.

Criteria for Air Quality Sampling Site Selection:
1. 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 roofdecks often serve as good sampling positions.
2. 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.
3. Do not place a sampler indoors or under obstructions like overhangs and tree canopies.
4. There should be at least 270 degrees unrestricted airflow around the sampler.
5. The sampler intake line should be about 2 to 15 meters above the ground.
6. To avoid windblown dust from the ground, choose a location with good ground surface cover, such as short grasses.
7. If the environmental monitoring plan does not identify a sampling station, choose a location that represents air quality around a populated area.
8. Where possible, there should be a clear line-of-sight between the source and the station.

Additional Reference on Sampling Site Selection:

Additional Reference on Air Sampling:
3.5 Noise Monitoring

Objective: To determine the impact of construction operations on noise levels

Responsible Persons: EIAPO, IO, EIARO and district staff trained in noise monitoring

Materials:
- Vicinity map
- GPS or compass
- Noise meter with calibration kit
- Data Sheet for Noise Monitoring (one sheet per reading)

Optional:
- Wind vane and anemometer with mast
- Outdoor thermometer
- Wet-bulb thermometer or hygrometer

Output: Noise measurements (to be included in Ambient Air Quality Sampling Report)

Procedure:
1. Choose a noise monitoring station close to the ambient air quality sampling station, following the Environmental Management Plan or sampling map if available.
2. Set up weather instruments and take readings of wind, temperature and humidity. Record data in Noise Monitoring Data Sheet (Annex 19). Locate each sampling station in the vicinity map.
3. Calibrate noise meter as necessary.
4. Set noise meter to record “A” weighted frequencies, and place setting on “Slow.”
5. With microphone facing the general direction of the project activity, take 50 successive instantaneous readings at 10-second intervals. Ignore values that may occur between readings. Tally each reading in the proper row of the Data Sheet.
6. After all 50 readings have been taken and tallied, count the number of occurrences of each noise reading and write down the total in second-to-last column of the Data Sheet.
7. After counting the total readings in each row, calculate the cumulative frequency and write down the total in the last column.
8. Take the average of the fifth and sixth highest reading and write down the result in the box labeled $L_{10}$. Do the same for $L_{50}$ (average of the 25th and 26th highest reading) and $L_{90}$ (average of the 45th and 46th highest reading).
9. For 24-hour sampling, use same procedure to obtain one set ($L_{10}$, $L_{50}$ and $L_{90}$) of noise measurements for each of the four monitoring periods: Daytime (0700H-1700H), Evening (1700H-2100H), Nighttime (2100H-0500H), and Morning (0500H-0700H). Each noise measurement should be determined from 50 readings using the procedure described above.
10. Prepare a table of results for inclusion in the Air Quality Monitoring Report. Follow the section on noise found in the Air Quality Monitoring Template.
3.6 Emergency Response

Objective: To ensure and monitor the implementation of environmental management measures during the conduct of emergency repair measures

Responsible Person: Team Leader from EIAPO, IO, EIARO or district

Overview: 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. Repair work not classified as urgent will have to go through the usual permitting procedures discussed in other sections.

Procedure:
1. Determine the scale of the damage, the repair work that needs to be undertaken, and the schedule of the work.
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. Describe what environmental protection measures and monitoring system that will be put in place by the DPWH during the repair activities. Invite the DENR to inspect the repair work.
3. Mobilize a team to conduct air, noise and water quality monitoring, following procedures in Sections 3.3, 3.4 and 3.5.
4. Prepare a monitoring report according to the recommended templates. Identify any opportunities for improving DPWH’s response to such emergencies.
4 Procedures for Environmental Project Auditing

The tasks under this function are those that are non-regulatory in nature and are conducted as part of the project cycle within the DPWH. It is the role of the EIAPO, IO, regional or district office in this cycle to ensure that environmental and social provisions are included in all contracts, and to ensure that these provisions are complied with. Since these provisions are often based on the ECC or are consistent with environmental quality standards, they are obviously closely related to post-ECC environmental monitoring. Indeed, these activities often overlap and may be conducted on field at the same time. However, unlike environmental monitoring, project auditing focuses on compliance with the institutional components of environmental management, and is performed through inspections and a review of paperwork.
4.1 **Contract Monitoring**

**Objective:** To ensure a contractor’s compliance with contract provisions on environmental protection and social enhancement

Responsible Person: Team Leader from EIAPO, IO, or EIARO

**Overview:** 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.

**Procedure:**

**During bidding process:**
1. Revise the sample DPWH Environmental Protection clauses found in Annex 24 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.

**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.
4.2 Project Inspection during Preconstruction

**Objective:** To evaluate onsite conditions to avoid potential environmental problems and compliance issues

**Lead Person:** Team Leader (assigned by IO)

**Support:** EIAPO or EIARO

**Materials and Equipment:**
- Map of project site
- Preconstruction checklist
- Tender documents
- Camera
- Personal Protective Equipment or PPE (hard hats, safety shoes, etc.)

**Output:** Accomplished inspection checklist for preconstruction (Annex 21)

**Overview:**

It is presumed that the Team Leader has been to the site at least once, or has read the EIA or IEE for the project. This familiarity with both the project and project site should guide the inspection.

During the preconstruction stage, no construction activity is taking place at the site, although some preparatory work may be ongoing. The main purpose of the visit is to inspect the proposed locations to be used for the work camp, equipment depot, fuel storage area, waste disposal site, quarries and other facilities. While the EIA has thoroughly studied the project site, these ancillary facilities are not likely to have been given the same attention in the report. The inspection must check whether these facilities were appropriately selected, if proper permits have been obtained, or whether they contain critical receptors that may be harmed during construction. The inspection will also identify potential problems during construction.

The preconstruction checklist is to be used to guide the inspection, but the inspection team should note that checklist should not be taken as the sole basis of the activity.

**Procedure:**
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.
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:
   - 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.

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 (see EMP for a list of possible measures).

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 21) 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.
4.3 **Project Inspection during Construction**

**Objective:** To evaluate onsite conditions for compliance with ECC, environmental standards, contractual requirements and other criteria.

**Lead Person:** Team Leader (assigned by IO)

**Support:** EIAP0 or EIAR0

**Materials and Equipment:**
- Checklist
- Tender documents
- Map of project site
- Camera
- Personal Protective Equipment or PPE (hard hats, safety shoes, etc.)

**Output:** Accomplished Inspection Checklist for Construction (Annex 22)

**Overview:**
This activity focuses on how well the Environmental Management Plan is implemented by the contractor as construction progresses. It also aims to check on workers’ health and safety, and on the overall sanitation and housekeeping practices at the worksites and ancillary facilities.

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.

**Procedure:**
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 (Annex 22) 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.
4.4 Project Inspection after Construction (Turnover)

**Objective:** To evaluate onsite conditions for compliance with ECC, environmental standards, contractual requirements and other criteria.

**Lead Person:** Team Leader (assigned by IO)

**Support:** EIAPO or EIARO

**Materials and Equipment:**
- Checklist
- Tender documents
- Map of project site
- Camera
- Personal Protective Equipment or PPE (hard hats, safety shoes, etc.)

**Output:** Accomplished Inspection Checklist for Project Turnover (Annex 23)

**Overview:** 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.

**Procedure:**
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 (Annex 23) 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.
4. In accomplishing the checklist, the inspector should always try to fill up the “Remarks” column with actual observations of the project site.
5 Other Tasks

This section is reserved for procedures other than those related to policy or environmental compliance. Currently, only the procedure for document review is presented. However, procedures for tasks that have yet to be formalized as well as new tasks that may arise in the future should be included in this section.
5.1 Procedure for Document Review

Objective: Review all reports for editorial and technical soundness

Lead Person: Quality Control Coordinator (to be selected by the office head)

Support: Technical and Editorial Reviewers

Overview:
A good review process is necessary to ensure the quality of reports prepared by an office. The review minimizes problems from the failure to check the contents of these reports. Although the review process adds a step to the release of documents, in the long run it avoids longer delays and complications arising from rejected reports or erroneous data.

All reports prepared by an office should undergo technical and editorial review regardless of their authorship. Only under urgent and special circumstances should the process be skipped. Each report must be certified as acceptable for release by the office’s quality control coordinator, and each report must be approved for release by the head of the office. Report preparers must be informed of the need to observe the review process, and make a habit of budgeting time and resources for its implementation.

The Quality Control Coordinator:
Each office shall assign a quality control (QC) coordinator to oversee the review of all reports prepared by the office, including critical official correspondence, and reports prepared by consultants. The QC coordinator shall be selected by the head of the office. The duties of the QC coordinator and procedure for overseeing the review are as follows:

1. Receive drafts of reports to be reviewed, accompanied by a review form (Annex 25).
2. Mark the date and assign a tracking number to each report submitted for review. Ensure that all reports undergoing review are labeled as “Draft.”
3. Assign an editorial and technical reviewer for each draft report and provide them with copies of the document.
4. Follow-up the timely completion of reviews.
5. Receive the reviewed draft report and the accomplished review form from the reviewers and ensure that a satisfactory review has been conducted.
6. Return the draft report to the author and make sure that the reviewers’ comments are understood.
7. Follow-up the revision of the draft report and receive the revised draft report.
8. Return the revised draft report to the reviewers to ensure that all necessary revisions listed in the review form and the corrected draft have been incorporated.
9. Certify that a report is ready for release and submit the report to the office head for final approval.

The Editorial and Technical Reviewer:
A reviewer should be selected from among qualified personnel not directly or substantially involved with the preparation of a report. The same person may be assigned to both editorial and
technical review. For reports requiring specialized expertise or attention from other offices, additional reviewers may be identified.

The duties of the reviewer and procedure for review are as follows:

1. Read thoroughly an assigned draft report.
2. For the technical reviewer: evaluate a draft report on the basis of its technical soundness, responsiveness to its objectives, compliance with applicable SEMS procedures and consistency with Department policies.
3. For the editorial reviewer: check a draft report’s grammar, format, clarity and the appropriateness of its language with its intended audience. For guidance, the MLA Style Handbook may be consulted pending the selection of an official Department style guide.
4. Return the draft report to the coordinator as soon as possible with the appropriate comments using standard proofreading notation.
5. Discuss the comments with the author if necessary.
References


ADDENDUM TO THE SOCIAL AND ENVIRONMENTAL MANAGEMENT SYSTEM (SEMS) OPERATIONS MANUAL

This addendum to the Social and Environmental Management Systems (SEMS) Operations Manual was prepared to update DPWH staff undertaking regular tasks for social and environmental impact assessment in the latest developments concerning Indigenous Peoples and donors’ social safeguard policies. When the main SEMS Operations Manual was released in April 2003, the Philippine Supreme Court had just affirmed the constitutionality of the IPRA Law and the National Commission on Indigenous People had just been constituted. This manual incorporates the procedures that the National Commission on Indigenous Peoples (NCIP) has issued concerning the formulation of the Ancestral Domains Sustainable Development and Protection Plan (ADSDPP) and obtaining the Free and Prior, Informed Consent (FPIC) of Indigenous Peoples (FPIC). It also relates the requirements demanded by the NCIP with the requirements of multilateral lending agencies like the World Bank. This Manual, along with the IROW Procedural Manual, puts into operation the DPWH’s LARRIP or the Land Acquisition, Resettlement, Rehabilitation and Indigenous Peoples’ Policy (LARRIP), the 3rd edition of the LARR Policy.

For complete guidance on social and environmental impact assessment, this manual has to be read alongside the main Social and Environmental Management Systems (SEMS) Operations Manual, the Infrastructure Right-of-Way (ROW) Procedural Manual, especially the Simplified IROW Procedures, and the LARRIP.

The LARRIP

In February 2007, the Department of Public Works and Highways approved a new policy for land acquisition, resettlement, rehabilitation, and indigenous peoples called the LARRIP. The LARRIP spells out the legal framework and donors’ policies governing instances when infrastructure projects implemented by the Department cause the involuntary taking of land, structures, crops, and other assets resulting in certain cases in the displacement and resettlement of affected persons. The LARRIP enumerates the entitlements and benefits that Project Affected Families (PAFs) or Persons (PAPs) should rightfully receive under the law based on the project’s adverse impacts on their assets, livelihood, and lives. It expounds on safeguards to be followed based on Philippine law when these affected persons are Indigenous Peoples, living inside and outside an officially declared ancestral domain. Finally, the LARRIP delineates the institutional framework for the implementation of the policy and provides mechanisms, both internal and external to the DPWH, for monitoring and evaluating the impact of safeguard measures, e.g. resettlement plan, indigenous peoples’ action plan.
1. INDIGENOUS PEOPLES

1.1. LEGAL AND INSTITUTIONAL FRAMEWORK

The rights of Indigenous Peoples are well-established in Philippine laws and jurisprudence. The Philippine Constitution acknowledges and promotes the rights of indigenous cultural communities to their ancestral domains and recognizes the applicability of customary laws in determining the ownership and extent of these ancestral domains. (Section 22, Article II; Section 5, Article XII). It directs the State to protect the rights of indigenous cultural communities to preserve and develop their cultures, traditions and institutions and to consider these rights in the formulation of national plans and policies. (Section 17, Article XIV).

Following the directive of the Constitution, Congress passed the Indigenous Peoples’ Rights Act (IPRA) in 1997. The IPRA sets conditions, requirements, and safeguards for plans, programs, and projects affecting Indigenous Peoples. It spells out and protects the rights of Indigenous Peoples.

The IPRA also created the National Commission on Indigenous Peoples (NCIP) to carry out the policies set forth in the IPRA. The NCIP has issued a number of orders that puts into operation the provisions of the IPRA, the most important for the purposes of this policy is NCIP Administrative Order No. 1 or the Free and Prior Informed Consent (FPIC) Guidelines of 2006.

1.2. PROCEDURES

The Free and Prior Informed Consent (FPIC) Guidelines of 2006 spells out the procedure for obtaining the Free and Prior Informed Consent for affected communities. It details the process for conducting Field Based Investigation (FBI) and obtaining the Certification Precondition from the NCIP attesting that the applicant has complied with the requirements for securing the affected ICC/IP’s FPIC. It also provides the procedure for validating projects solicited/initiated by Indigenous Peoples.
Module 1.2.1. Determining the Presence of Indigenous Peoples or the Existence of Ancestral Domains in Potential Project Areas

Objectives:

a. To identify if there are Indigenous Peoples living or using the land in the vicinity of the project.
b. To determine if a project identified for possible implementation will affect an ancestral domain.

Offices/Persons Involved:

For projects, at the Central Office:
- Project Director and staff;
- Environmental and Social Safeguards Office (ESSO) Staff assigned for the Region where the project will be implemented;
- For other projects
  - Director, Regional Office and staff
  - Regional Environmental Assessment Office (REAO) staff
  - District Engineer, DEO and staff

Procedure:

1. Once the necessity for a particular project is established during the Project Identification Stage, the first step is to prepare a brief Project Description

   a. Type of Proposed Structure;
   b. Scope of Work: Specify project type according to the following:
      i. Development: Construction of a new productive unit;
      ii. Rehabilitation: Restoration of an existing unit to essentially the same condition as when it was first constructed;
      iii. Reconstruction: Construction involving major modifications to the existing unit in terms of design, magnitude, and efficiency
      iv. Improvement: Restoration of an existing unit to a condition better than that of the present.
   c. Project Technical Description: A short and concise description of the physical and technical nature of the project, including the standard units of physical measurement of the category, e.g. for buildings – in square meter; for roads – in kilometer; for flood control, in lineal meters.
   d. Municipality(ies) to be traversed/affected by the project;
   e. Justification/benefits of the project;
   f. Location Map of the Project
2. Visit the NCIP Provincial, Regional, or Central Office and do preliminary research or scoping:
   a. An Ethnographic Map of the Project Area;
   b. A Masterlist of Ancestral Domains
   c. Ancestral Domain Sustainable Development and Protection Plan (ADSDPP)

3. Visit the NCIP Provincial, Regional, or Central Office and submit the above Project Description.

4. The NCIP Regional Director should order the conduct of a pre-Field Based Investigation (FBI) Conference. (following NCIP Administrative Order No. 1, series of 2006 or the Free and Prior Informed Consent Guidelines of 2006 appended to this addendum). The purpose of the pre-FBI is to determine if a known ancestral domain is affected.

5. Attend the pre-FBI conference at the provincial or regional office of the NCIP.

6. If during the pre-FBI conference, it was determined that no known ancestral domain would be affected, the Provincial Officer submits report to the NCIP Regional Director. Otherwise, proceed to step 10.

7. Within three days upon receipt of the report, the Regional Director of the NCIP will issue a Certificate of Non-Overlap (CNO) to the project proponent. The CNO comes with a signed undertaking that the applicant agrees to the conduct of the FBI/FPIC requirement should it be found later that there is, in fact, an overlap in whole or in part of any ancestral domain.

8. Report receipt of the CNO.

9. Commence feasibility studies.

   --End--

10. If the NCIP has definitely determined that an overlap exists with a known ancestral domain or the NCIP is not certain that the project does overlap with a known ancestral domain, request through the NCIP a meeting with the Provincial Consultative Bodies of IPs.

11. Prepare for the meeting. The meeting can have either of two objectives:
   a. If an overlap cannot be ascertained by the NCIP, seek the PCB guidance regarding the presence of IPs in the area or the existence of an ancestral domain.
b. If an overlap has been determined, work to have the PCB endorse the project. Consult the Ancestral Domain Sustainable Development and Protection Plan (ADSDPP) to see if the road project is part of the priorities of the IP community.

12. Present the above Project Description to the Provincial Consultative Bodies (PCBs) of IPs.

13. If the PCB cannot ascertain the presence of IPs and ancestral domains, the NCIP can call for an FBI. Proceed to Module 1.2.3 Obtaining Voluntary Initiation or Solicitation from Indigenous Peoples

14. If the PCB can ascertain the presence of IPs and ancestral domains and has determined that there is an overlap, request for an endorsement. Proceed to Module 1.2.2. The Field Based Investigation
Module 1.2.2. Obtaining Voluntary Solicitation or Initiation from Indigenous Peoples

Voluntary solicitation or initiation from Indigenous Peoples can greatly enhance the social acceptability, and hence, the feasibility of the project. Given the public nature and function of national roads and highways, the policy of the DPWH is to first obtain the voluntarily endorsement of Indigenous Peoples whose ancestral domains will be affected by the civil works component and linked activities. By voluntary the process by which this endorsement is obtained should be free from coercion and manipulation, through a process consistent with the affected IPs customary law, witnessed by an official of the National Commission on Indigenous Peoples (NCIP), participated in by the recognized leaders/elders of the community.

All expressions of voluntary initiation or solicitation of projects should be properly documented. Part VI of NCIP Administrative Order No. 1 states that the NCIP shall validate all expressions of voluntary initiation or solicitation of projects and provides a process for doing so.

Objectives:

- To spell out the process for obtaining voluntary solicitation or initiation from IPs

Offices/Persons Involved:

For projects, at the Central Office:
- EIA team
- Survey Team
- Environmental and Social Safeguards Office (ESSO) Staff assigned for the Region where the project will be implemented;
- Regional Environmental Assessment Office (REAO) staff

Procedure:

1. In the course of conducting the perception survey or the public consultations as part of the EIA process, the EIA team may have encountered Indigenous Peoples (IPs), the Survey Team Leader should flag this to the EIA team leader.
2. The EIA team leader (if a non-ESSO staff or a consult) should inform the REAO.
3. The REAO staff crafts a separate consultation process for IPs affected.
4. The REAO coordinates with the NCIP Provincial and Regional Office regarding the consultation, i.e. the framework, the process, the date, the venue, etc.
5. Ensure that NCIP attends and witnesses the consultation.
6. Carry out the consultation according to the IPs customary law, in a language understood by them, with adequate representation from all sectors of the community, and attended by the leaders. The project proponent may decide to let the NCIP representative facilitate the meeting.
7. Disclose the project in a manner that is informative but would not unduly raise expectations or anxieties.

8. Obtain the following information:
   a. the IP groups in the area;
   b. the number of IPs;
   c. their location;
   d. the areas that they use for livelihood;
   e. their practices, whether nomadic or sedentary;
   f. their “rootedness” in the area, i.e. whether they are migrants, whether they are “indigenous” or have collective attachment to the area, and whether they had settled there after being displaced by a government project, by war, natural calamities, and other forcible means.
   g. their attitudes towards the project;

9. Comprehensively document the proceedings;

10. Diligently record the names of those who attended.

11. Obtain their signatures to attest to their attendance.

12. If expressions of voluntarily solicitation or initiation is obtained, document this.

13. Translate in a language that the IPs understand;

14. Obtain the signatures of the IP elders/leaders and members of the community

15. Obtain the signature of the NCIP representative as facilitator/witness.

16. Submit these documents to the NCIP for validation and/or issuance of Certification Precondition.
Module 1.2.3. The Field Based Investigation (FBI)

NCIP Administrative Order (AO) No. 1, series of 2006 calls for the conduct of a Field Based Investigation (FBI) to ascertain if a plan, program, project or activity overlaps with or affects an ancestral domain. It is also conducted to ascertain the extent of the affected areas and the ICCs/IPs whose FPIC is to be obtained. For the conduct of the FBI, NCIP Administrative Order No. 1, series of 2006 directed the formation of an FBI team for each province consisting of at least three (3) members, two of whom shall come from the Provincial Office and one (1) from the Community Service Center (Service Center) or vice versa. Based on the NCIP AO No. 1, the project proponent, presumably to avoid conflicts of interest, have no role in the conduct of the FBI. However, funding for the conduct of the FBI is to be provided by the project proponent.

Whatever the participation of the DPWH is in the FBI process, it is to the best interest of the DPWH that the FBI be conducted properly. The FBI process properly done can stand in place of the social assessment required by multilateral lending agencies like the World Bank whenever initial screening shows that Indigenous Peoples are likely to be affected by the project. At the end of this module is a matrix comparing the social assessment requirements of the World Bank.

The Field Based Investigation (FBI) should be conducted ideally during the feasibility studies stage. The results are important inputs for crafting the budgets for the different contract packages and for drawing different scenarios to avoid, minimize, or mitigate adverse effects to Indigenous Peoples and ancestral domains.

Objectives:

a. To list down the possible tasks of the DPWH during the FBI.
b. To determine the equivalency of the FBI with the requirements of multilateral lending agencies for social assessment.

Offices/Persons Involved:

For projects, at the Central Office:
- Environmental and Social Safeguards Office (ESSO) Staff assigned for the Region where the project will be implemented;

For other projects
- Regional Environmental Assessment Office (REAO) staff
Procedure:

1. Prepare a budget for the conduct of the FBI.
2. Secure vehicles and necessary logistics for the FBI team.
3. Join the FBI team;
4. Furnish the FBI team with the necessary documents.
5. Advise the FBI team regarding the technical aspects of the project, e.g. extent, from what station the road rehabilitation begins where it ends, location of potential quarry sites.
6. Observe consultations with indigenous peoples.
7. Prepare a back-to-office report.

Table 1: Comparison of Social Assessment Requirement and the Field Based Investigation

<table>
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<tbody>
<tr>
<td>1. A review, on a scale appropriate to the project, of the legal and institutional framework applicable to Indigenous Peoples;</td>
<td>IP Policy Framework as part of the LARRP of the project proponent. Found in the Social and Environmental Management Systems Manual (SEMS) of NRIMP-2.</td>
</tr>
<tr>
<td>2. Gathering of 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;</td>
<td>FBI:</td>
</tr>
<tr>
<td></td>
<td>• Copy of the latest official barangay or municipal census record indicating the IP population in the affected area, and/or other available listings;</td>
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<tr>
<td></td>
<td>• Views and opinions of elders/leaders on what should cover the area affected following Section 11 (a) of the Guidelines, their approximation of the number of IP household heads within the area affected;</td>
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<td></td>
<td>• Indicative map showing the extent of the overlap and the names of Sitios and Barangays affected;</td>
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<td>• Initial documentation of concerned ICCs/IPs decision-making process for purposes of Section 25 of the guidelines;</td>
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### Table 1: Comparison of Social Assessment Requirement and the Field Based Investigation

<table>
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<tr>
<th>O.P. 4.10 Requirements</th>
<th>Country System: Field Based Investigation</th>
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<tr>
<td>3. Taking the review and baseline information into account, the identification of key project stakeholders and the elaboration of a culturally appropriate process for consulting with the Indigenous Peoples at each stage of project preparation and implementation.</td>
<td>FBI:</td>
</tr>
<tr>
<td></td>
<td>• Validation and listing of elders/leaders of the affected community;</td>
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<tr>
<td></td>
<td>• Initial documentation of concerned ICCs/IPs decision-making process for purposes of Section 25 of the guidelines;</td>
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<td></td>
<td>• Recommendations needed for the proper conduct of the FPIC proceedings.</td>
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<tr>
<td>4. An assessment, based on free, prior, and informed consultation, with the affected Indigenous Peoples’ communities, of the potential adverse and positive effects of the project. Critical to the determination of potential adverse impacts is an analysis of the relative vulnerability of, and risks to, the affected Indigenous Peoples’ communities given their distinct circumstances and close ties to land and natural resources, as well as their lack of access to opportunities relative to other social groups in the communities, regions, or national societies in which they live;</td>
<td>FBI</td>
</tr>
<tr>
<td></td>
<td>• Highlights of the discussions and attendance sheet duly signed/thumbmarked by the IP elders/leaders;</td>
</tr>
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<td></td>
<td>• Addressed in the FPIC process found in NCIP Administrative Order No. 1 or the Free, Prior and Informed Consent Guidelines of 2006 Part V, Sections 22 to 30.</td>
</tr>
<tr>
<td>5. The identification and evaluation, based on free, prior, and informed consultation with the affected Indigenous Peoples’ communities, of measures necessary to avoid adverse effects, or if such measures are not feasible, the identification of measures to minimize, mitigate, or compensate for such effects, and to ensure that the Indigenous Peoples receive culturally appropriate benefits under the project.</td>
<td>Addressed in the FPIC process found in NCIP Administrative Order No. 1 or the Free, Prior and Informed Consent Guidelines of 2006 Part V, Sections 22 to 30 and Part VIII, the Memorandum Agreement, Sections 43 to 48.</td>
</tr>
</tbody>
</table>
1.2.4. Obtaining the Free, Prior and Informed Consent (FPIC) from Indigenous Peoples

Plans, programs, projects, and activities that affect ancestral domains and Indigenous Peoples that have been resettled in public lands due to past government projects and due to natural calamities and war require the Free, Prior, and Informed Consent of the affected ICCs/IPs. (For the scope of these plans, program, projects, and activities, see Part II of the NCIP Administrative Order No. 1 or the Free, Prior, and Informed Consent Guidelines of 2006.) The process for obtaining the FPIC is explained in Part V of NCIP Administrative Order No.1 series of 2006. The DPWH is the project proponent and has no other role than to present the project. The process is managed by the FPIC. However, there are things that DPWH should avoid so as not jeopardize the process, and with it, the project.

Objective:

- To list down actions that should be avoided by DPWH personnel when dealing with affected IP communities before, during, and after the FPIC process.

Offices/Persons Involved:

For projects, at the Central Office:

- Environmental and Social Safeguards Office (ESSO) Staff assigned for the Region where the project will be implemented;

For other projects

- Regional Environmental Assessment Office (REAO) staff

Actions to be Avoided:

- Employment or use of force, threat, coercion, intimidation, at any degree or in any manner, including those done by individuals or group of persons acting for the applicant;

- Bringing of firearm/s in the community during visits by the applicant or group of persons acting fro the applicant. When needed, armed security shall be obtained from local police authorities or the Armed Forces of the Philippines as requested by the NCIP;

- Bribery of promise of money, privilege, benefit or reward other what is presented by the applicant during the consultative community assembly/first meeting and with the elders/leaders;

- Clandestine or surreptitious negotiations with IP individuals, some members of the community concerned or leaders done, without the knowledge of the council of elders or majority of the members of the community;
o Donations to the community or to any of its members for the purpose of influencing the decision of the ICCs/IPs.

o Holding of unauthorized meeting such as but not limited to wining and/or dining sessions and the like or such other activities with the NCIP Official and personnel and/or members of the affected community, with the intention of unduly influencing the result of the FPIC process;

o Deliberately delaying the progress of the FPIC process.
Objective

The objective of this chapter is to assist the DPWH ESSO (Environmental and Social Safeguards Office), the Regional Environmental Impact Assessment Office (REIAO) staff, and the RAP Focal Person at the District Engineering Offices (DEO) in the preparation of an Indigenous Peoples’ Development Plan (IPDP) or the Indigenous Peoples’ Action Plan (IPAP). (For brevity and consistency, the acronym IPAP will be used throughout the text.)

This chapter does the following:

- It explains what an IPAP is;
- It explains the rationale for an IPAP;
- It discusses the situations when an IPAP has to be drawn up;
- It explains the larger policy and legal framework impacting the crafting of the IPAP and the significance or relationship of existing country instruments to the IPAP;
- It compares the contents of the IPAP to that of the Memorandum of Agreement (MOA) required by the National Commission on Indigenous Peoples whenever a plan, project, or activity affects an ancestral domain;
- It spells out specific tasks involved in the crafting of an IPAP at each stage of the project cycle.

Offices/Persons Involved:

For projects, at the Central Office:
- Environmental and Social Safeguards Office (ESSO) Staff assigned for the Region where the project will be implemented;

For other projects:
- Regional Environmental Assessment Office (REAO) staff

Legal References:

Republic Act 8371 or the Indigenous Peoples’ Rights Act (IPRA)
What is an IPAP?

When an infrastructure project has been found through the social assessment to have potentially adverse effects on Indigenous Peoples there is need to formulate an Indigenous Peoples Plan (IPAP). The IPAP sets out measures through which the DPWH and other government agencies will ensure that Indigenous Peoples affected by the project receive culturally appropriate social and economic benefits. It also specifies ways that the identified adverse effects are avoided, minimized, mitigated, or compensated.

Why an IPAP?

In the process of construction, upgrading, rehabilitation, or maintenance of infrastructure projects exerts impacts on the surrounding community. Many of these impacts are negative and can either be temporary or permanent. These affect different groups in varying degrees of intensity. Because of pre-existing conditions and circumstances, some are more vulnerable than others. The distinct circumstances of Indigenous Cultural Communities (ICCs) or Indigenous Peoples (IPs) expose them to types and degrees of risks from infrastructure projects that more mainstream groups or dominant groups in society do not and are not likely to experience. These risks include loss of identity and culture, destruction of customary livelihoods, exposure to disease, heightened experience of discrimination as infrastructure projects displace them from the land on which their identity and way of life are inextricably linked and deprive them of natural resources they depend on. Aware of these risks, national and DPWH policy calls for prudence, caution, and care in the planning, design, and implementation of infrastructure projects to avoid potentially adverse effects on Indigenous Peoples or when avoidance is impossible, to minimize, mitigate, or compensate for these adverse effects.

In what situations does an IPAP need to be formulated?

An IPAP has to be formulated whenever Indigenous Peoples are likely to be affected by an infrastructure project regardless of number, the type of effect, their intensity, or their location.

In the extremely rare case, when a project affects only one (1) Indigenous Person (IP), an IPAP still has to be prepared. The question in this situation is if the IPAP is to be presented as a stand-alone document or integrated in other social safeguard documents such as the Resettlement Action Plan (RAP).

The impact on the IP community or families may be marginal or minor not involving any resettlement, affecting only a insignificant fraction of the IP families’ land and requiring only a small amount of compensation. Nevertheless, an IPAP still needs to be formulated.

An IPAP has to be crafted if the affected IPs are residing in their ancestral domain or outside. In the case when IPs are to be resettled while other affected IPs will
remain in their area of residence, an IPAP has to be formulated for both resettled IP and those staying put in the area of residence.

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<th>When a Stand-Alone IPAP has to be formulated</th>
<th>When the IPAP is integrated as a Special Section of the RAP</th>
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<td>Number.</td>
<td>When the affected IPs are 20% or more than the total number of Affected Persons</td>
<td>When the affected IPs are less than 20% of total Project Affected Persons (PAPs).</td>
</tr>
<tr>
<td>Type of Impact</td>
<td>Mixture of Severe and Marginal With Resettlement or No resettlement</td>
<td>Mixture of Severe and Marginal With Resettlement or No Resettlement.</td>
</tr>
<tr>
<td>Location</td>
<td>Inside and Outside an Ancestral Domain</td>
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</table>

If the project is voluntarily initiated or solicited by IPs, should an IPAP be formulated?

If a project were voluntarily initiated or solicited by IPs, an IPAP is not required. In the event, the DPWH enters into a Memorandum of Agreement (MOA) with the affected IP community, inside or outside an ancestral domain, that provides for benefits other than those provided by law, this MOA will serve as an IPAP.

What are the policies and framework governing the formulation of an IPAP?

Republic Act 8371 or The Indigenous Peoples’ Rights Act (IPRA) recognizes certain rights of Indigenous Peoples or Indigenous Cultural Communities (ICCs) that bear upon the formulation of an IPAP. These are:

- The right to an informed and intelligent participation in the formulation and implementation of any project, government or private, that will impact upon their ancestral domains; (Chapter III, Section 7b);
- The right to participate fully, if they so choose, at all levels of decision-making in matters which may affect their rights, lives and destinies through procedures determined by them; (Chapter IV, Section 16)’
- The right to receive just and fair compensation for any damages inflicted by or as a result of any project, government or private; (Chapter III, Section 7b)’
- The right to stay in their territory and not to be removed from that territory through any means other than eminent domain. If relocation is necessary as an exceptional measure, it can only take place with the free and prior informed consent of the IPs and ICCs concerned; (Chapter III, Section 7c);’
- The right to be secure in the lands to which they have been resettled; (Chapter III, Section 7d);
The right to determine and decide their own priorities for the lands they own, occupy, or use; (Chapter IV, Section 17).

NCIP Administrative Order (AO) No. 1 series of 2004 sets out guidelines for the formulation of the Ancestral Domain Sustainable Development and Protection Plan or ADSDPP.

As defined in AO No.1 series of 2004, an ADSDPP “embodies the goal and objectives, policies and strategies of ICCs/IPs for the sustainable management and development of their ancestral domain and all resources therein including the human and cultural resources such as Indigenous Knowledge Systems and Practices (IKSPs). Its aim is to ensure that the rights of ICCs/IPs are protected, promoted, and recognized. Anchored on a community-based planning approach, the ADSDPP serves as a community-based blueprint for the ICC/IPs’ total development plan.

The ADSDPP contains the list and schedule of programs/projects towards the sustainable development and protection of ancestral domains. This list facilitates the conduct of the Free and Prior Informed Consent (FPIC). The ADSDPP has three (3) major parts: the Ancestral Domain and Community Situationer; the Development Plans and Programs; and the ADSDPP Implementation Policies and Mechanisms.

NCIP Administrative Order (AO) No. 1 series of 2006 or the Free and Prior Informed Consent (FPIC) Guidelines of 2006 enumerates and elaborates on the guidelines for the exercise of the Free, Prior, and Informed Consent by Indigenous Peoples on any plans, projects, or activity that are to be introduced into or would affect any ancestral domain area. It also spells out in details the procedure for applying for a Certification Precondition, for the conduct of Field Based Investigation (FBI), and for securing the Free and Prior Informed Consent of the affected ICC/IPs. When the ICC/IPs gives its Free and Prior Informed Consent to the infrastructure project, the terms and conditions are embodied and formalized in a Memorandum of Agreement between and among the project proponent, the affected ICC/IPs, the NCIP, and other involved parties.

World Bank Operational Policy 4.10 states that if projects are likely to positively or adversely affect Indigenous Peoples (IP), the borrower conducts a social assessment. On the basis of this social assessment and in consultation, the borrower or project proponent prepares an Indigenous Peoples’ Plan (IPP) or Indigenous Peoples’ Action Plan (IPAP). The IPAP spells out measures by which the proponent will ensure that:

- Indigenous Peoples affected by the project receive culturally appropriate social and economic benefits;
- Potential adverse effects on Indigenous Peoples are identified and these adverse effects are avoided, minimized, mitigated.

The level of detail and complexity of the IPAP depends on the specific project and the kind of effects to be addressed. For instance, when the overwhelming majority of
those to be adversely affected are IPs, then an IPAP needs to be prepared. The proponent integrates the IPAP into the project design.

What are the differences among ADSDPP, the Memorandum of Agreement (MOA), and the IPAP?

The ADSDPP is a long-term community-based, comprehensive plan that contains the ICCs/IPs’ collective vision, mission, general objectives, long-term goals, and priority concerns. The ADSDPP contains a list of development plans and projects that is used as reference in determining the fit between the proposed infrastructure project and the long-term development goals and priority concerns of the affected ICC/IP. Being long-term, the ADSDPP does not refer to specific impacts of projects; neither does it refer to measures to enhance positive effects or avoid, minimize, mitigate, or compensate adverse impacts.

The Memorandum of Agreement (MOA) is a requirement of the IPRA and NCIP Administrative Order No. 1 series of 2006 or the Free, Prior and Informed Consent Guidelines of 2006. It is forged when:

- a project affects a known ancestral domain or an IP community which has been resettled in lands of the public domain due to a government project or to displacement because of war, natural calamities,
- the affected ICC/IPs have given their Free, Prior and Informed Consent (FPIC) to the Project.

The MOA sets down the terms and conditions of the agreement reached between the proponent and the affected IP community/ies. The FPIC team prepares the MOA strictly according to The FPIC Guidelines of 2006 lists down the contents of the MOA:

- the detailed premises of the agreement;
- All parties involved;
- Inclusive dates/duration of the agreement;
- Other than what has already been granted by law, the benefits to be derived by the host ICC/IPs indicating the type of benefits, specific target beneficiaries as to sector and number, the period covered, and other pertinent information that could guide the future monitoring and evaluation of the MOA;
- Use of all funds to be received by the host ICC/IP communities, ensuring that a portion of such funds shall be allocated for development projects, social services, and/or infrastructures in accordance with their development framework;
- Detailed measures to protect IP rights and value systems;
- Detailed measures to conserve/protect any affected portion of the ancestral domain critical for watersheds, mangroves, wildlife sanctuaries, forest cover, and the like;
- Responsibilities of the applicant as well as the host IP community;
- The monitoring and evaluation system of the MOA, to include submission of reports and creation of monitoring teams;
- Whether the concerned ICCs/IPs shall require another FPIC to be conducted in case of merger, reorganization, transfer of rights, acquisition by another entity, or joint venture;
- Remedies and/or penalties for non-compliance or violation of the terms and conditions which includes applicability of customary laws and imposition of sanction/s.
- Undertaking in writing to answer for damages which the ICCs/IPs may suffer on account of the plan, program, project or activity or a cash bond or a surety bond to be deposited or posted by the applicant if the ICCs/IPs so requires; and
- Other requirements provided in the Guidelines.

The IPAP is a World Bank requirement crafted by the proponent for Bank-financed projects, whenever these projects have been found through the social assessment to have potentially adverse effects on Indigenous Peoples. The IPAP sets out measures through which the DPWH and other government agencies will ensure that Indigenous Peoples affected by the project receive culturally appropriate social and economic benefits. It specifies ways that the identified adverse effects are avoided, minimized, mitigated, or compensated. It also includes a financing plan and a mechanism for monitoring.

Can the MOA serve as the IPAP?

To answer the question, it is important to determine what the contents of an IPAP are. The elements of an IPAP are found on the left column of the matrix below. Their equivalents in the MOA prescribed by the FPIC Guidelines of 2006, safeguard instruments, and Government of the Republic of the Philippines instruments are found on the right column.

<table>
<thead>
<tr>
<th>Elements of an IPAP (from O.P. 4.10 of the World Bank)</th>
<th>MOA of the FPIC Guidelines of 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>A review, on a scale appropriate to the project, of the legal and institutional framework applicable to Indigenous Peoples</td>
<td>LARRIP</td>
</tr>
<tr>
<td>Gathering of 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</td>
<td>FBI report (separate NCIP or Philippine government requirement and pre-requisite to the conduct of the FPIC process)</td>
</tr>
<tr>
<td>A summary of the social assessment</td>
<td>FBI Report (separate NCIP or Philippine government requirement)</td>
</tr>
<tr>
<td>A summary of the results of the free, prior, and informed consultation with the affected Indigenous Peoples’ communities during project implementation</td>
<td>FPIC report of the FPIC team plus the Resolution of Consent or Non-Consent issued by the affected IP communities (separate NCIP or Philippine government)</td>
</tr>
<tr>
<td>An action plan of measures to ensure that the Indigenous Peoples receive social and economic benefits that are culturally appropriate, including, if necessary, measures to enhance the capacity of the MOA</td>
<td>Other than what has already been granted by law, the benefits to be derived by the host ICC/IPs</td>
</tr>
</tbody>
</table>
| Project Implementing Agencies. | MOA: 
indicating the type of benefits, specific target beneficiaries as to sector and number, the period covered, and other pertinent information that could guide the future monitoring and evaluation of the MOA; |
|-------------------------------|--------------------------------------------------------------------------------------------------|
| When potential adverse effects on Indigenous Peoples are identified, an appropriate action plan of measures to avoid, minimize, mitigate, or compensate for these adverse effects | MOA: 
Detailed measures to protect IP rights and value systems; Detailed measures to conserve/protect any affected portion of the ancestral domain critical for watersheds, mangroves, wildlife sanctuaries, forest cover, and the like |
| The cost estimates and financing plan for the IPAP | MOA: 
Use of all funds to be received by the host ICC/IP communities, ensuring that a portion of such funds shall be allocated for development projects, social services, and/or infrastructures in accordance with their development framework; |
| Accessible procedures appropriate to the project to address grievances by affected Indigenous Peoples' communities arising from project implementation. When designing the grievance procedures, the borrower takes into account the availability of judicial recourse and customary dispute settlement mechanisms among the Indigenous Peoples. | Provided for in Section 47 and 48 of the FPIC Guidelines of 2006. 
Provided for in the IP Policy Framework and Procedures, a separate World Bank Requirement |
| Mechanisms and benchmarks appropriate to the project for monitoring, evaluating, and reporting on the implementation of the IPAP. The monitoring and evaluation mechanisms should include arrangements for the free, prior, and informed consultation with the affected Indigenous Peoples' communities. | MOA: 
The monitoring and evaluation system of the MOA, to include submission of reports and creation of monitoring teams; |

**How does one go about crafting the IPAP? At what stages of the project cycle does an IPAP need to be formulated?**

When the affected IPs are less than 20% of the total Project Affected Persons (PAFs), a separate section is contained in the Full Resettlement or Abbreviated Resettlement Action Plan (RAP). When the affected IPs are more than 20% of the total Project Affected Persons (PAFs), a full-blown IPAP is drafted.

The RAP Focal Person at the District Engineering Office with the support and technical assistance of the ESSO and the REIAO will prepare the IPAP. Preparations for the crafting an IPAP should begin at the Pre-Feasibility Studies stage.

At the Pre-Feasibility Studies stage, it is important to determine if the project as conceived will likely pass through or affect a known ancestral domain.
At the FS stage, the objective is to make an initial identification of those contract packages that will likely affect ICCs/IPs, the different ICCs/IPs who will likely be affected, and the potential effects on them. At this stage, consultation should begin with Provincial Consultative Bodies (PCBs) of IPs and with those IPs who will likely be affected by the project. The objective of the consultation is to gauge their attitude towards the project while taking care not to raise expectations. To identify the IPs, the Field Based Investigation may be conducted here by the NCIP alongside the Social Impact Assessment that the DPWH will be doing. If support is evident or if the Contract Package is identified in the Ancestral Domain Sustainable Development and Protection Plan (ADSDPP), (assuming the ADSSPP were available) the project proponent may, with or without the NCIP, get written statements of endorsement or voluntary solicitation. The NCIP can validate if these written endorsements or voluntary solicitation were obtained freely, without manipulation, after proper disclosure, in a consultation representative of the potentially affected IPs/ICCs. The Feasibility Studies should also produce a list of scenarios or alternatives for each Contract Package (CP).

During project appraisal, the cost and benefits, including the risks of each Contract Package are assessed. At the end of the project appraisal, the list of contract packages is finalized. If there are CPs that will likely affect IPs, an IP policy framework is drawn up by the proponent.

At the Detailed Engineering Stage, consultations continue. The Resettlement Action Plan (RAP) is finalized. After the design has been finalized, this is disclosed to the affected ICCs/IPs. Their initial support is finalized. If no endorsement is made, the NCIP with the DPWH commences the Free and Prior Informed Consent process for affected IPs living inside their Ancestral Domain. If successful, the FPIC process should result in a Memorandum of Agreement (MOA) which doubles as an IPAP. For those affected IPs living outside an ancestral domain, an IPAP is drawn, provided that IPs constitute more than twenty percent (20%) of Project Affected Persons (PAP). If less than this proportion, a special chapter on IPs is appended to the full-blown or abbreviated Resettlement Action Plan (RAP). The MOA and/or the IPAP should be integrated in the project design.

Implementation of the IPAP and/or MOA commences prior to construction and continues during construction. Observance of the IPAP and/or MOA is monitored internally by the DPWH and externally by the External Monitoring Agent (EMA). The NCIP also monitors the MOA and/or IPAP.

In the post-construction stage, an evaluation is conducted of the Resettlement Action Plan and the MOA/IPAP to determine if the ICCs/IPs were better off with the project than without it or at the very least, they maintained the quality of life they enjoyed before project implementation.
<table>
<thead>
<tr>
<th>Stage in the Project Cycle</th>
<th>Objective: Pre-Feasibility Studies</th>
<th>Activities</th>
<th>Output</th>
<th>Relation to IPAP/IPAP Elements</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>To determine if the project will pass or affect a known ancestral domain area.</td>
<td>Prepare project plan, description and other relevant documents, including indicative map. Submit these to the NCIP. If available, obtain a listing of Ancestral Domains including ethnographic maps. Examine if the project will pass through a known ancestral domain. If not, apply for a Certificate of Non-Overlap.</td>
<td>Project profile, plan, description, other relevant documents. Application for a Certificate of Non-Overlap.</td>
<td>Certificate of Non-Overlap</td>
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<tr>
<td>Feasibility Studies</td>
<td>To identify those contract packages that will most likely affect IPs. To initially identify the IP groups who will likely be affected by the project; To ascertain initial impacts of contract packages on IPs To determine IPs’ initial attitude towards the project.</td>
<td>To review legal and institutional framework governing IPs. Coordinate with the NCIP for Social Impact Assessment and for consultations with the Provincial Consultative Bodies (PCBs). Consult PCBs if the project will affect known ancestral domains or if there are indigenous peoples living along the route or in the immediate vicinity. Obtain endorsements/statements of support/solicitation from PCBs. If PCBs cannot ascertain the presence of IPs or an ancestral domain, DPWH works with the NCIP to conduct Field Based Investigation. The FBI conducted can serve as the Social Assessment required by O.P. 4.10. If available, consult the ADSDPP. During the FBI, conduct first consultation with ICC/IPs likely to be affected by the project. Assess ICC/IPs’ attitude towards the project. If IPs prove supportive, obtain endorsements/statements of support/solicitation from ICCs/IPs.</td>
<td>Social Impact Assessment Report Written endorsement that the project are voluntarily initiated/solicited by affected IP communities and PCBs.</td>
<td>Gathering of 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 as part of the FBI and the Social Impact Assessment Report A summary of the results of the free, prior, and informed consultation with the affected Indigenous Peoples’ communities. If voluntary endorsements/solicitations are secured from the ICCs/IPs, no IPAP needed. If no voluntary endorsement, explore alternative routes.</td>
</tr>
<tr>
<td>Stage in the Project Cycle</td>
<td>Objective:</td>
<td>Activities</td>
<td>Output</td>
<td>Relation to IPAP/IPAP elements</td>
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<tr>
<td><strong>Project Appraisal</strong></td>
<td>To determine whether to proceed with the contract package or not.</td>
<td>To assess project feasibility, costs and benefits and risks To finalize list of contract packages To craft the project’s framework governing IPs.</td>
<td>Policy Framework Governing IPs</td>
<td>Institutional and Legal Framework Governing IPs</td>
</tr>
<tr>
<td><strong>Detailed Engineering (including RAP Preparation)</strong></td>
<td>To obtain free and prior informed consent from the affected ICCs/IPs finalize the IPAP, and integrate it in the project design</td>
<td>DPWH: If unfinished, continue getting voluntary endorsements from IPs. NCIP: Conduct validation of consultations to determine if indeed project was voluntarily solicited or initiated by IPs. NCIP with DPWH: If not voluntarily solicited, conduct free, prior, and informed consent proceedings including presentation of detailed design of the road. DPWH: Integrate the MOA and/or the IPAP into the project design</td>
<td>Detailed Design, RAP IPAP Writtem endorsement from IPs that the Contract Packages are voluntarily solicited/initiated</td>
<td>Certification on Precondition (that validates the consultations done); Validation of Resolution of Consent or Non-Consent</td>
</tr>
<tr>
<td>Stage in the Project Cycle</td>
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<tr>
<td>Construction</td>
<td>To implement and monitor the implementation of the IPAP</td>
<td>Implementation of IPAP, Monitoring of IPAP</td>
<td>External and Internal Monitoring Reports</td>
<td>Monitor ing Reports</td>
</tr>
<tr>
<td>Post Construction</td>
<td>To assess the overall effect of IPAP implementation</td>
<td>Post-Project Monitoring of IPAP</td>
<td>External and Internal Evaluation Reports</td>
<td>Evaluat i on Reports</td>
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