



**Ministry of Public Works
Directorate General of Highways**

**Western Indonesia National Road
Improvement Project (WINRIP)**

**ENVIRONMENTAL AND SOCIAL MANAGEMENT
FRAMEWORK (ESMF)**

FINAL DRAFT

Revised March 2011

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PART I - INTRODUCTION

1. BACKGROUND

1. This Environmental and Social Management Framework (ESMF) is required by the Western Indonesia National Road Improvement Project (WINRIP, herein referred to as the Project) to identify the required environmental and social management measures that need to be taken by the Project authorities during the planning, design, construction and operations of the road segments (including bridges), in order to ensure compliance with the Government of Indonesia's (Gol) own requirements and those of the World Bank.

2. PROJECT DESCRIPTION

1. *Project Components.* The Project is intended to finance a part of the DGH investment program for National roads with a particular focus on the western corridor of Sumatra. The corridor is one of the three main corridors in Sumatra and connects the city of Padang (with a population of around one million) to major towns along the west coast (Bukittinggi, Sibolga and Bengkulu). It also connects through connector roads on the west coast to Medan in the northeast and to Pekanbaru in the center of the island. The project has four components:
 - **Component 1: Betterment¹ and Capacity Expansion of National Roads (US\$314.9 million).** This will cover three annual work programs of betterment and capacity expansion of 715.6 km and replacement of 190 meters of bridges. The sub projects in each annual work program are shown in Table 2.1 below.
 - **Component 2: Implementation Support (US\$16.5 million).** This will provide support to the MPW for the implementation of the civil works, including: (a) provision of Core Team Consultants (CTC) and Design and Supervision Consultants (DSC); (b) Project management support and technical audits and improvement; and (c) road safety audits and improvements on the Project roads. This is directly related to the implementation of the civil works and covers consulting services for design and supervision of the civil works in Component 1; management support and technical audits to help improve the quality of construction and support to help governance improvements during procurement and implementation; and a series of systematic road safety audits of road designs for all project roads in Component 1. This is to ensure compliance with safety standards and regulations, identify road hazards and undertake remedial treatments for safety improvements.
 - **Component 3: Road Sector Institutional Development (US\$3.0 million).** This will provide support to strategically address key sector issues, including:
 - a) Support for establishment of Procurement Service Units (ULPs) in MPW at the central level and at the *Balai* level in the Project provinces on a pilot basis,

¹ In Indonesia, "betterment" typically involves the base course strengthening, minor widening, providing a new asphalt wearing course, and improving drainage. In most cases, the road already has an asphalt pavement.

including activities related to the development of the ULPs, review of organizational options, establishment of the units and development of a regular training and capacity building function, and related activities.

- b) Strengthening the e-procurement system of MPW to enable electronic submission of bids, including: (i) enhancement of design and implementation architecture and technical features, particularly in critical areas such as security, disaster recovery plans, audit trails, data generation for procurement monitoring and measuring performance/compliance; and (ii) capacity building for users (MPW staff as well as bidders) and for the establishment of help desks.
 - c) Strengthening disaster risk mitigation in the road sector, including capacity building support for the new environment/risk mitigation and road safety unit of DGH to conduct disaster risk assessments and planning, risk mapping of landslides, coastal erosion, earthquake and floods, and analysis of alternative designs for road segments that pass through critical environmental assets and vulnerable areas.
- o **Component 4: Contingency for Disaster Risk Response (\$0).** This will provide preparedness and rapid response to disaster, emergency and/or catastrophic events as needed.²

Table 2.1 Sub Project Roads under WINRIP

No.	Sub-project	Km	Province	IDR billion	US\$ million	US\$ mil./km
1	Krui – Biha	25	Lampung	148,668	16.52	0.661
2	Padang Sawah – Simpang Empat including the Air Gadang Bridge	40.9	West Sumatra	207,390	23.04	0.563
3	Manggopoh – Padang Sawah	32	West Sumatra	152,435	16.94	0.529
4	Ipuh - Bantal	42.4	Bengkulu	226,275	25.14	0.593
AWP-1 Sub-Total		140.30		734,768	81.64	0.582
5	Sp Rampa - Poriaha	11.1	North Sumatra	55,126	6.13	0.552
6	Ps. Pedati - Kerkap	25	Bengkulu	72,018	8.00	0.320
7	Indrapura - Tapan	19.5	West Sumatra	96,921	10.77	0.552
8	Bts Kota Pariaman - Manggopoh	46.8	West Sumatra	183,268	20.36	0.435
9	Rantau Tijang – Kota Agung	42	Lampung	149,831	16.65	0.396
10	Simpang Empat – Sp. Air Balam	61.7	West Sumatra	241,617	26.85	0.435
11	Bantal - Mukomuko	50.1	Bengkulu	157,820	17.54	0.350
12	Kambang - Indrapura	55.2	West Sumatra	171,948	19.11	0.346
13	Sp Rukis – Tj Kemuning	56.3	Bengkulu	225,482	25.05	0.445
AWP-2 Sub-Total		367.70		1,354,031	150.46	0.409
14	Painan - Kambang	31.5	West Sumatra	118,993	13.22	0.420
15	Sibolga – Bts TapSel	36	North Sumatra	129,228	14.36	0.399
16	Seblat - Ipuh including Air Lalang and Air Guntung bridge	34.5	Bengkulu	110,237	12.25	0.355

² In the event this component is used, environmental and social assessments of proposed activities will be undertaken and appropriate documents prepared as necessary to meet Indonesian and World Bank requirements.

17	Sp. Gng Kemala – Pugung Tampak including Way Taau bridge	36.8	Lampung	104,238	11.58	0.315
18	Mukomuko – Batas Sumbar	25.8	Bengkulu	69,233	7.69	0.298
19	Lais - Bintuan	11.6	Bengkulu	37,558	4.17	0.359
20	Lubuk Alung - Sicincin	14.6	West Sumatra	54,557	6.06	0.415
21	Lubuk Alung - Kuraitaji	16.8	West Sumatra	65,788	7.31	0.435
AWP-3 Sub-Total		207.6		689,832	76.64	0.369
Contingency				55,530	6.17	----
TOTAL		715.60		2,834,161	314.91	0.440

3. THE ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

3.1 OVERVIEW OF THE ESMF

1. The Environmental and Social Management Framework (ESMF), that is this document, is based on the Environmental Protection and Management measures mandated by laws and regulations of the Government of Indonesia and the World Bank's own Safeguards Policies.
2. The ESMF provides detailed guidelines and information for the preparation of sub project environmental and social management plans, as follows:
 - a. The formats for reports on SPPL, UKL/UPL and AMDAL studies, which are included in **Annex 1** Environmental Protection and Management measures. (For details see Part II of this document)
 - b. The description of the preparation of UKL/UPL and AMDAL documentation is included in **Annex 2**.
 - c. The report formats to be used for comprehensive Land Acquisition and Resettlement Action Plan (LARAP) and abbreviated LARAP, are included in **Annex 3**. Procedures for conducting LARAP and abbreviated LARAP are described in Sections 4 to 8 of the ESMF.
 - d. The use of Environmental Codes of Practice (ECOP) contained in **Annex 4 for compliance with the World Bank's Environmental Assessment OP4.01**
 - e. The RPF applies to all WINRIP sites (sub-projects) and all linked projects.

3.2 ENVIRONMENTAL SCREENING AND STUDIES

1. *Indonesia Environmental Protection and Management measures*. The Environmental Screening flow chart (Annex 2) identifies the triggers for a full environmental impact assessment (AMDAL) or an environmental mitigation and monitoring plan (UKL/UPL), based on Regulations of the Minister of Environment No. 11 in 2006 [5] and the Minister of Public Works No. 10/PRT/M/2008 in 2008 [6]. AMDAL screening criteria now include bridges over 500 meters in length. The logical decision process has been clarified in this flow chart.
2. Annex 2 describes the screening requirements for SPPL, UKL/UPL and AMDAL. The preparation of the documents will be carried out by DSC Consultants or their sub consultants. In all cases the Project Proponent will be DGH and the approving agency will be the BLH/BLHD/Dinas Lingkungan Hidup of the Province or Kabupaten. The

estimated time required for a UKL/UPL study is 3 – 4 months, and for an AMDAL study, 6 – 12 months.

3. *World Bank Environmental Assessment OP4.01.* During preparation of the project, all of the sub projects under AWP1 have been screened, and AWP2 and AWP3 have been preliminarily screened during project preparation against all of the World Bank's safeguards policies. The screening results are contained in table 3.1 and are based on determining the project's potential direct, induced and or cumulative impact on the environment, including sensitive ecosystems such as forests and other natural habitats. The screening was done also to determine which other World Bank safeguards policies are triggered by the project. The screening results confirm that these sub projects will NOT lead to significant land use changes. Therefore, incremental induced or indirect impacts on the environment including on forests and other natural habitats are not likely. The screening results also conclude that the potential environmental and social impacts are likely to be minor construction related, site specific and temporary in nature which can be mitigated through the use of standard environmental codes of practice.

3.3 ENVIRONMENTAL CODES OF PRACTICE

1. The Environmental Codes of Practice (ECOP) for compliance with the World Bank's OP 4.01 is contained in Annex 4 of this ESMF. The requirements of these ECOP and of the Indonesian RKL/RPL or UKI/UPL will be included in all sub project civil works contracts through a set of special environmental clauses (SECs) included in Section 1.17 of the Technical Specification in the bidding documents. These set of Special Environmental Clauses (SECs) will be subject to revision for each sub project to ensure the relevant issues for each sub project are being adopted. Annex 5 of this ESMF contains a typical set of SEC's.
2. The Guidelines in the ECOP (See Annex 4) are in two Parts and include:
 - I. Indonesia's Road Sector Environmental Management Guidelines, which are in four sections;
 - General Guideline for Road Sector Environmental Management
 - Planning Guideline for Road Sector Environmental Management
 - Implementation Guideline for Road Sector Environmental Management
 - Monitoring Guideline for Road Sector Environmental Management.
 - II. Special Environmental Guidelines for Roads and Bridges on WINRIP Subproject.

TABLE 3.1 SCREENING RESULTS³

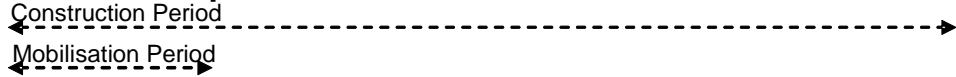
No.	Sub-project	Km	Province	EA/Social Documents required under the GoI System		EA Documents Required under the WB OP4.01
	AWP-1			ENV	SOCIAL	
1.	Krui - Biha	25.0	Lampung	N/A	LARAP	ECOPS

³ As stated in section 3.2, paragraph 3 above, all impacts are construction related and the only triggered environmental safeguards policies are Environmental Assessment OP4.01 and Physical Cultural Resources OP4.11

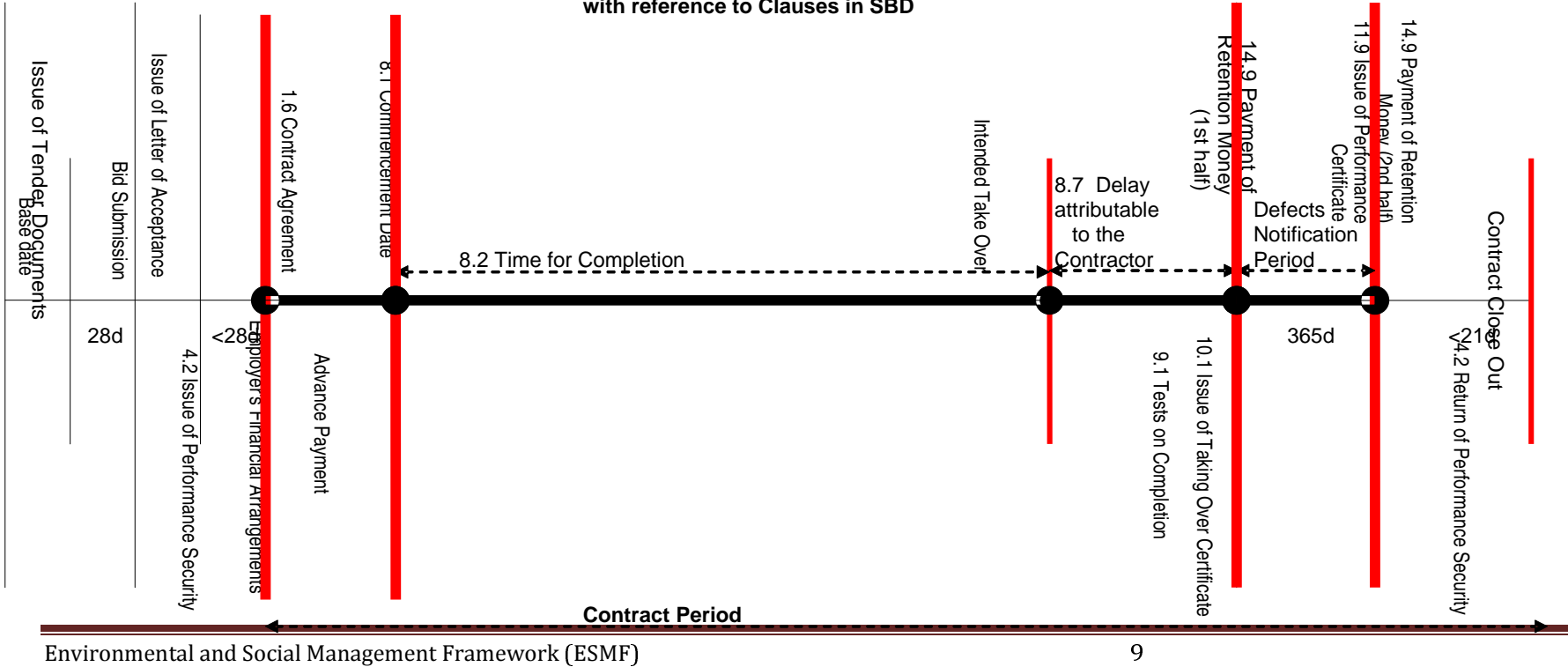
2.	Padang Sawah – Simpang Empat including the Air Gadang Bridge	40.9	West Sumatra	N/A	LARAP	ECOPS
3.	Manggopoh – Padang Sawah	32.0	West Sumatra	N/A	LARAP	ECOPS
4.	Ipuh - Bantal	42.4	Bengkulu	N/A	LARAP	ECOPS
AWP-2						
5.	Sp Rampa - Poriaha	11.1	South Sumatra	UKL/UPL	SLARAP	ECOPS
6.	Ps Pedati - Kerkep	25.0	Bengkulu	N/A	LARAP	ECOPS
7.	Indrapura - Tapan	19.5	West Sumatra	UKL/UPL	SLARAP	ECOPS
8.	Bts Kota Pariaman - Manggopoh	46.8	West Sumatra	AMDAL	SLARAP	ECOPS
9.	Rantau Tijing – Kota Agung	42.0	Lampung	AMDAL	LARAP	ECOPS
10.	Simpang Empat – Sp Air Balam	61.7	West Sumatra	AMDAL	SLARAP	ECOPS
11.	Bantal - Mukomuko	50.1	Bengkulu	AMDAL	SLARAP	ECOPS
12.	Kambang - Indrapura	55.2	West Sumatra	AMDAL	SLARAP	ECOPS
13.	Sp Rukis – Tj Kemuning	56.3	Bengkulu	N/A	N/A	ECOPS
AWP-3						
14.	Painan - Kambang	31.5	West Sumatra	AMDAL	SLARAP	ECOPS
15.	Sibolga – Bts TapSel	36.0	South Sumatra	AMDAL	SLARAP	ECOPS
16.	Seblat – Ipuh including Air Lalang and Air Guntung bridges	34.5	Bengkulu	AMDAL	SLARAP	ECOPS
17.	Sp Gunung Kemala – Pugung Tampak	36.8	Lampung	AMDAL	LARAP	ECOPS
18.	Mukomuko – Batas Sumbar	25.8	Bengkulu	UKL/UPL	SLARAP	ECOPS
19.	Lais - Bintuan	11.6	Bengkulu	N/A	N/A	ECOPS
20.	Lubuk Alung - Sicincin	14.6	West Sumatra	UKL/UPL	SLARAP	ECOPS
21.	Lubuk Alung - Kurataji	16.8	West Sumatra	UKL/UPL	SLARAP	ECOPS

FIGURE 3.1 SCHEDULING OF ESMF ACTIVITIES IN RELATION TO AWP2 AND AWP3 SUB PROJECTS

1. Pre-Bid / Tender Period	2. Pre-Construction Period	3. Physical Construction Period	4. Post-Construction Period
1.1 Finalize Screening 1.2 Conduct Consultations 1.3 Conduct Detailed Studies 1.4 Complete Land Acquisition 1.5 Integrate requirements of ECOP into Designs, Specs and BoQ's ...	2.1 Review Contractor Plans 2.2 Disseminate Public Information 2.3 Conduct Consultations	3.1 Implementation of Construction Stage Environmental Management Measures 3.2 Monitor Implementation of Environmental Management Requirements 3.3 Monitor Implementation of Agreements on Social Aspects 3.4 Evaluate Monitoring & Consultation Results 3.5 Document Activities in Monthly Reports	4.1 Evaluate Compliance 4.2 Document Results 4.3 Implement O & M Stage Environmental Management Measures 4.4 Monitor Implementation (4.3)
DSC, DGH, BAPPEDA,, BLH	DGH, DSC	DGH/DSC, Contractor, BLH	BLH DGH, Balai



TYPICAL SEQUENCE OF PRINCIPAL EVENTS DURING CONTRACTS FOR CONSTRUCTION with reference to Clauses in SBD



3.4 LAND ACQUISITION

1. A Land Acquisition and Resettlement Policy Framework (LARPF) gives overall guidance for the preparation of full LARAPs, abbreviated LARAPs, and TRACER studies for those Sub-projects where land was previously acquired. The LARPF is prepared based on the World Bank's policy on Involuntary Resettlement (OP. 4.12) and Indonesia Regulations that are in-line with the World Bank Policy. The terms and procedures are described in Part II of this document.

3.5 MANAGEMENT OF THE APPLICATION OF SAFEGUARDS

1. These ESMF activities must be coordinated with planning, design and construction. Figure 3.1 above shows the scheduling of ESMF activities in relation to the sequence of contractual milestones for civil works contracts under WINRIP.
2. The preparation and implementation of LARAP and abbreviated LARAPs will be the responsibility of the relevant local government agency, coordinated by BAPPEDA. Responsibilities for all activities required are set out in the ESMF itself, which forms Part II these Guidelines.
3. Monitoring of environmental impacts during construction will be carried out as one of the supervision tasks, to be specified in the Terms of Reference of the Supervision Consultant. A sample format for routine observation and reporting of environmental impacts is shown in Annex 5, and is known as the Environmental Management and Monitoring Plan (EMMP).

3.6 MONITORING OF LARAP IMPLEMENTATION

1. The ESMF requires that independent institutions (such as local NGOs, Universities of similar) be retained to periodically carry out external monitoring and evaluation of the implementation of LARAPs. This will be managed by the PMU with the support of the DSC.

3.7 ESTIMATION OF THE COST OF LAND ACQUISITION AND RESETTLEMENT

1. The ESMF requires that compensation be paid for land acquisition and resettlement based on:
 - a. Real replacement cost/ market value of land;
 - b. The cost of any registration and transfer taxes;
 - c. Material market price to build replacement buildings similar to the affected building or to repair a partially affected structure, including the cost of hauling materials and labour;
 - d. Established price standards for various kinds of trees and cash crops;
 - e. The cost of preparing land for agricultural and other use for resettlement;
 - f. The cost of relocation assistance, which covers the cost of moving and an allowance equal to the local average cost of living in a transition period.
2. The cost of these items (Abbreviated as Land Acquisition Costs) is estimated as follows:
 - a. **Real replacement cost of land:** following current Indonesia Regulation Perpres 36/2005, 65/2006 and BPN regulation 3/2007 the value of affected land will be determined by on the basis of appraisal carried out by Land Appraising Institution in the municipality or the district where the project is located. If the appraising institution does not exist, the task will be carried out by Land Appraisal Team formed by District Head. The calculation will be based on the total area of the land determined in the final design, or where final design has not yet been prepared; it

should be estimated based on the maximum ROW. In both cases the value is based on the Selling Value of Tax Object (NJOP) in the current year or the actual market value in the 3 last years transactions. The factors affecting the value of land are: the location of the land, the type of rights in the land, the use of the land, the available infrastructure, the facilities and utilities, and the environment. The type of the land right and the status of land are as follows: Hak Milik (right of ownership), Hak Guna Usaha (right of exploitation), Hak Guna Bangunan (right of building), Hak Pakai (right of use).

- b. **The cost of any registration and transfer taxes:** registration and transfer taxes will cover any change of the documentation of land title/certificates caused by the reduction in the area of the affected land and increasing the DGH ROW. The cost will include cost for releasing, transferring the land title, and installing the boundary demarcation markers.
 - c. **Material market price to build replacement buildings** Building and other objects related to land will be valued at their “replacement cost”, i.e., the market cost of the material to build a replacement structure with an area and quality similar to those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site, plus cost of any labor. In applying this method of valuation, depreciation of structures and assets will not be taken into account.
 - d. **Established price standards for various kinds of trees and cash crops:** the value will be obtained during the preliminary survey for land identification of affected land or refer to the value determined by regional institutions in charge of agricultural matters in Kabupaten.
 - e. **The cost of preparing land for agricultural and other use for resettlement:** the quality of agricultural land should be a similar level to the affected land, and if the land needs improvement to a level similar with the affected land, the cost for preparation should be included. The cost estimate should cover all equipment and labour.
 - f. **The cost of relocation assistance**, which covers the cost of moving and an allowance equal to the local average costs of living in a transition period: This cost will be included in the calculation of land value plus the cost for rebuilding or repairing the affected building/structure.
Note: In accordance with current Indonesia Regulations **land donation** is not acceptable.
3. The amount budgeted for WINRIP has been based on this method. Payment procedures for Land Acquisition are referred to the PMM.

4. APPLYING THE ENVIRONMENTAL AND SOCIAL MANAGEMENT PROCESSES FOR AWP 2 AND AWP 3

4.1 WORLD BANK ENVIRONMENTAL REQUIREMENTS FOR WINRIP

Based on the initial screening done as part of the feasibility Studies, only the following World Bank Environmental Safeguards Policies have been triggered by the project.

1. **Environmental Assessment OP4.01** – Based on the screening of AWP1, AWP2 and AWP3 sub projects, the potential impacts from the proposed sub projects will mostly be associated with construction activities. These impacts will be mostly site specific as they would occur primarily along the alignment of these selected road sections and bridges. Some impacts may also occur at offsite locations such as at quarries or spoil disposal sites. These potential impacts are not likely to lead to cumulative and/or induced impacts on natural habitats or critical natural habitats. Therefore, in compliance with Environmental Assessment OP4.01 the project as a whole has been categorized “B”. Again, based on the screening of these sub projects, the preparation of Environmental Impact Assessments and Environmental management plans will not be required. The sub project environmental impacts will be addressed by applying a set of comprehensive Environmental Codes of Practice (ECOP) contained in Annex 4 of this report.
2. **Physical Cultural Resources OP4.11** – The screening has shown that AWP 1 Sub project (Ipuh-Bantal) affects two tombs and that some AW2 and AW3 sub projects may also affect some Physical Cultural Resources. Therefore, this project has triggered OP4.11.

However, the World Banks Natural Habitats OP4.04 is NOT triggered by this project. This policy is only triggered by projects that may potentially have adverse impacts on natural habitats. The policy specifically prohibits the World Bank from supporting projects that in the Bank’s opinion involve the significant conversion or degradation of critical natural habitats. Based on the screening results for AWP1 sub projects and the preliminary screening done for AWP2 and 3, the land use immediately adjacent to the selected road sections is mostly agricultural land (i.e., palm oil, tea, resin, rubber, coffee, coconut, and cinnamon). The selected sections pass through 25 districts with a total population of more than 4 million. Also, given that the works are limited to betterment works, the adverse impacts on these agricultural areas are likely to be construction related impacts only and will be short term. Therefore, the project will not trigger this policy as the project will not have impacts on natural habitats or critical natural habitats as defined by the policy. However, as a pre-cautionary measure, during the detailed engineering design stage the final screening of AWP2 and AWP3 sub projects will be confirm this.

The policy defines the following as follows:

- **Natural habitats** - are land and water areas where (i) the ecosystems' bio-logical communities are formed largely by native plant and animal species, and (ii) human activity has not essentially modified the area's primary ecological functions. All natural habitats have important biological, social, economic, and existence value. Important natural habitats may occur in tropical humid, dry, and cloud forests; temperate and boreal forests; natural arid and semi-arid lands; mangrove swamps, coastal marshes, and other wetlands; estuaries; sea grass beds; coral reefs; freshwater lakes and rivers; alpine and sub alpine environments, including herb fields, grasslands, and paramos; and tropical and temperate grasslands. Biodiversity outside of natural habitats (such as within

agricultural landscapes) is not covered under this policy. It is good practice to take such biodiversity into consideration in project design and implementation

- **Critical natural habitats** are: (i) existing protected areas and areas officially proposed by governments as protected areas (e.g., reserves that meet the criteria of the World Conservation Union [IUCN] classifications), areas initially recognized as protected by traditional local communities (e.g., sacred groves), and sites that maintain conditions vital for the viability of these protected areas (as determined by the environmental assessment process); or (ii) sites identified on supplementary lists prepared by the Bank or an authoritative source determined by the Regional environment sector unit (RESU). Such sites may include areas recognized by traditional local communities (e.g., sacred groves); areas with known high suitability for bio-diversity conservation; and sites that are critical for rare, vulnerable, migratory, or endangered species. Listings are based on systematic evaluations of such factors as species richness; the degree of endemism, rarity, and vulnerability of component species; representativeness; and integrity of ecosystem processes.
3. Therefore, for Compliance with the World Bank's own requirements, when the Design detailed engineering design and screening for WP2 and WP3 sub projects are being done by the Design and Supervision Consultant and the DGH, under the supervision and guidance from the World Bank task team, sub projects that require, (i) a new alignment and/or require civil works beyond the Betterment⁴ works and (ii) that trigger Natural Habitats OP4.04 will NOT be eligible for financing by this project and will be removed from the list of sub projects.
 4. This ESMF and the LARPF contained in Part II applies to all WINRIP sites (sub-projects) and all linked projects. A linked project is defined in accordance with OP4.12 as one that is: (a) directly and significantly related to WINRIP; (b) necessary to achieve its objectives; and (c) carried out or planned to be carried out contemporaneously with WINRIP. With respect to linked projects DGH hereby commits to complying with the requirements of this ESMF for linked projects.
 5. There is only one linked site identified in the known 21 road segments and 4 bridges. In the event of any changes to the Project, a further analysis will be done on any newly identified activities and the LARAF will apply to all such activities and any linked projects.
 6. Based on the screening of WP1, in one case, a bridge (Air Magnia bridge) is located within the Krui Biha road section sub-project included in WP-1. The improvement of this bridge is not included in WINRIP list of sub-projects because DGH intends to finance the replacement of this bridge using its own budget. This bridge is considered a linked project within the definition provided by OP4.12; therefore the DGH will apply the requirements of this ESMF to this bridge. Although no similar situations are anticipated in WP2 and WP3, if the World Bank determines that any sub project is linked, the DGH will apply the requirements of this ESMF to that sub project. The LARPF in this ESMF requires that an assessment be carried out on the Air Magnia bridge and that a LARAP be prepared and disclosed if any resettlement as defined in the LARPF will occur as a result of works on that bridge. If a LARAP is required, all assistance and compensation under any such LARAP must be completed prior to the commencement of construction on the Air Magnia bridge.

⁴ Betterment typically involves the base course strengthening, minor widening, providing a new asphalt wearing course, and improving drainage.

4.2 GOVERNMENT OF INDONESIA AMDAL REQUIREMENTS FOR WINRIP

1. GoI environmental management requirements for WINRIP are based on the Environment Impact Assessment System (AMDAL) as mandated by:
 - GOI PP No. 27, 1999;
 - Permen PU No.10/PRT/M/2008 Tahun 2008,
 - MPW, Director General Highways, Guidelines for Env. Management of Road Projects, 2004
 - Ministry of Environment Regulation No 11, 2006
 - Ministry of Environment Regulation No 13, 2010
2. All proposed WINRIP subprojects are subject to environmental impact screening (Figure 4.2) to identify one of three treatments: i) standard environmental clauses and/or SPPL, ii) an environmental mitigation (EMiP) and monitoring (EMoP) plan (UKL/UPL) report or iii) a full EIA (AMDAL). Processes ii) and iii) include a requirement for an examination of potential impacts on both the biophysical and the socio-cultural and built environment, although the extent of the social impact in terms of land acquisition and resettlement has an impact on AMDAL only when land acquisition extends to more than 30 ha outside the RoW for inter-urban roads and less for increasingly urban areas. In such cases a full AMDAL is triggered.
3. Under the Ministry of Environment Regulation 13, 2010 all road betterment projects which does not meet AMDAL criteria requirements or the UKL/UPL will require the preparation of a Surat Pernyataan Kesanggupan Pengelolaan dan Pemantauan Lingkungan Hidup (SPPL) (Letter of ability to manage and monitor the environment). This requires consultation and approval from the Kabupaten/Kota/Provincial environment institution. This is a new requirement and there is no experience of preparation and approval. The Format for preparation is included in Annex 2.
4. Standard Environmental Clauses (SEC), (referred to as Environmental Specifications or environmental Safeguards below) in the Contract Documents are required to support environmental management of all sub projects, including those for which mitigation measures have been identified

4.3 APPLICATION OF ENVIRONMENTAL MANAGEMENT REQUIREMENTS FOR AWP2 AND AWP3 UNDER INDONESIA AMDAL REQUIREMENTS

1. If the first tier screening indicates that nationally important features will not be significantly degraded a second tier of analysis must be completed where impacts, also in terms of significance, must be assessed for the following ecosystem components:
2. The screening for all sub-projects AWP2 and AWP3 will be completed according to the screening process defined in Figure 4.2.
3. All sub projects which does not meet AMDAL criteria requirements or the UKL/UPL will require the preparation of a SPPL (See Annex 2). For subprojects which have the potential to generate some adverse but not significant environmental impacts, the preparation of Environmental Mitigation and Monitoring Plans (UKL/UPL) will be required. This site-specific field investigation will identify the particular mitigation measures required for any subproject, and the monitoring processes required to be undertaken during implementation.

4. Projects which are identified as potentially generating significant environmental impacts require a full Environmental Impact Assessment (AMDAL), and this larger field study will identify whether the project as designed can be undertaken, and the mitigation measures needed to be included. The formats for reporting for both UKL/UPL studies and AMDAL studies, have been agreed and are summarized in the Project Management Manual (PMM).

4.4 PREPARING A UKL/UPL OR AMDAL

1. The environmental screening process for all DGH road and bridge projects is summarized in Figure 4.2. Comparison of the circumstances of a subproject against the long-list of criteria found in Figure 4.2 will identify whether the project requires an AMDAL, an UKL/UPL or a simple set of SECs and/or SPPL.
2. With either an AMDAL or UKL/UPL, mitigation and monitoring plans must be prepared. The preparation of the UKL/UPL or AMDAL document is specified in detail in the Indonesian law and regulations, and will be elaborated in the Project Management Manual (PMM). The 12 steps identified in Figure 4.1 generally define the process through the conduct and approval of the UKL/UPL and the implementation of the mitigation and monitoring plans.
3. Subprojects requiring AMDAL will need case-by-case planning and a timetable specific to the issues to be assessed. Involvement of Indonesia's Ministry of Environment is likely.

4.5 PREPARING A SPPL (SURAT PERNYATAAN KESANGGUPAN PENGELOLAAN DAN PEMANTAUAN LINGKUNGAN HIDUP)

1. Under Permen LH No. 13 year 2010, these are required for all projects which does not meet AMDAL criteria requirements or the UKL/UPL. The precise procedures are still to be determined. Their preparation will be the responsibility of DSC.

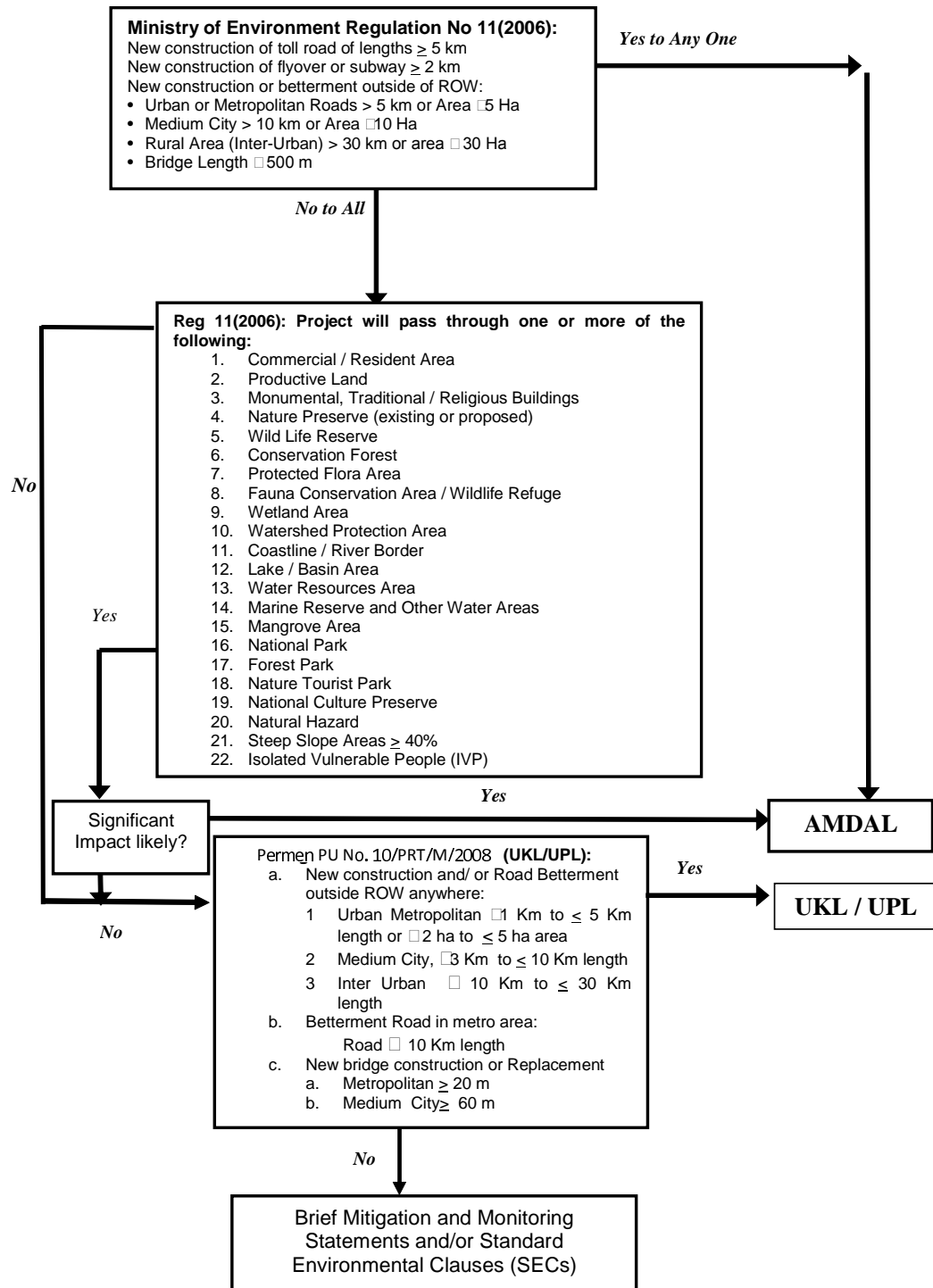
4.6 HARMONIZING WORLD BANK ECOPS REQUIREMENTS WITH INDONESIAN AMDAL, UKL AND UPL AND SPPL REQUIREMENTS

1. The ECOPs in Annex 4 are being used for compliance with World Bank requirements as stated earlier. To ensure simplicity and practicability between the ECOPs and the Indonesia Amdal documents, the DSC will ensure the ECOPs requirements inform the design of the Amdal documents. The Amdal documents are to be designed so that they contain the requirements of the ECOPs in them.

Figure 4.1: Optimal Schedule of Steps for Completion of Subproject UKL/UPL Studies

Step	Description of Key UKL / UPL Activities PER Contract Package	Direct Responsibility	Months													
			1	2	3	4	5	6	7	8	9	10	11	12	13	13 to 24
1	Conduct UKL / UPL study.	DSC Sub Cons	■	■												
2	Check UKL / UPL prior to submission to BLH for approval.	Subdit			■											
3	Review / approve UKL / UPL (maximum 30 day review).	BLH/BLHD			■	■										
4	Integrate UKL / UPL measures into DED and Owners & Estimate, and all other Contract Documents.	DSC Sub Cons					■									
5	Approve of Owner's Estimate for UKL / UPL measures for Bid Docs.	PMU						■								
6	Review UKL / UPL docs & include cost for required measures in Bid.	Civil Works Contractors							■							
7	Confirm UKL / UPL costs included in Bid Evaluations.	PMU								■						
8	Coordinate with BLH/BLHD in UKL / UPL monitoring and reporting.	DSC/ P2JJ														
9	Implement Required UKL / UPL Measures.	Contractors														
10	Supervise UKL / UPL performance of PMSC / RSC.	Subdit														
11	Monitor subproject performance.	PMU														
12	Monitor overall project performance & Environmental compliance.	DGH/WB														

Figure 4.2: Indonesian Environmental Impact Screening Process for AWP2 and AWP3



4.7 APPLICATION OF SOCIAL MANAGEMENT MEASURES

1. DGH have agreed to apply the World Bank's Land Acquisition and Resettlement Planning Framework (LARPF) (adapted from previous World Bank projects) as providing the relevant set of social safeguards to be used for WINRIP. The Framework outlined in Part II of this Document defines the conditions under which project-affected-people and households are categorized, and the procedures to be used for land acquisition, resettlement and compensation. Current GoI regulations (Presidential Proclamation No. 36/2005 and No 65/2006, and BPN Regulation No. 3/2007) regarding land acquisition and compensation will be used where this Framework provides less specific instructions, and/or where Indonesian laws must be applied.
2. The LARPF identifies the conditions under which a Land Acquisition and Resettlement Action Plan (LARAP) or abbreviated LARAP is to be prepared whenever there are people who lose their property or fixed assets or who need to be relocated.
3. DGH have agreed that if land acquisition or land consolidation takes place for any subproject less than 2 years before the start of WINRIP, a "tracer study" will be required. This will be used to determine retrospectively whether land acquisition was conducted in a manner consistent with the requirements of a properly-conducted LARAP. If a positive finding is returned, the subproject will be accepted for inclusion in the WINRIP program. If there are project-affected people being worse off due to the land acquisition, remedial action will be taken to assist them to at least at the level before the land acquisition.
4. The preparation and implementation of LARAP and abbreviated LARAPs will be the responsibility of the relevant local government agency (BAPPEDA), but these may be assisted by DGH and the WINRIP Design and Supervision Consultants (DSC) with the conduct of socio-economic surveys. BAPPEDA will be responsible for the issuance of all necessary Decrees, and the formation and management of Land Acquisition Committee (LAC) which will govern all entitlement and grievance issues, and oversee the compensation process. It is likely that a local NGO or University will be involved as independent compliance monitors.
5. Should any proposed WINRIP subprojects be located within 10 km of any Indigenous Vulnerable Peoples (IVP), a Social Impact Assessment (SIA) study will be required. If this identifies that the subproject will have a significant impact, then a full IVP Development Plan will need to be prepared, to identify ways of ensuring that adverse impacts are fully mitigated.

4.8 PREPARING THE ABBREVIATED LARAP AND LARAP

1. If any subproject requires land acquisition or the displacement of existing occupants or users of land affected by a subproject, an abbreviated LARAP or LARAP may be required. It is essential that these be carefully and properly conducted, so that no individual suffers adverse impacts without adequate compensation being paid, and that all processes used be fully transparent.
2. The process must start with a census of people and assets impacted or potentially impacted by the project. Based on this data, the abbreviated LARAP or LARAP process is triggered, each with a slightly different set of steps.

- The steps identified in Figure 4.3 outline the process to be followed for WINRIP subprojects.

Figure 4.3: Optimal Schedule of Steps Required for LARAP and abbreviated LARAP Preparation

Step	Description of Key ABBREVIATED LARAP or LARAP Activities	Direct Responsibility	Months										
			1	2	3	4	5	6	7	8	9		
1	Establish approx number of PAPs/PAHs involved and categorize as LARAP or ABBREVIATED LARAP	DSC, PMU & BAPEDA	■										
2	Conduct ABBREVIATED LARAP or LARAP, including PAP survey, entitlement matrix, implementation schedule	DSC		■	■	■	■	■					
3	Review / finalize draft ABBREVIATED LARAP/LARAP, for approval.	DSC/BAPEDA / PMU						■					
4	Review / approve draft ABBREVIATED LARAP/LARAP,	DGH WBank							■				
5	Authorize GOI funding for ABBREVIATED LARAP/LARAP implementation and agreed compensation payments.	PMU & BAPEDA								■			
6	Form Land Acquisition Committee (LAC) to oversee LARAP process (not needed for ABBREVIATED LARAP).	BAPEDA & Local Government							■				
7	Implement ABBREVIATED LARAP/LARAP, including payment of agreed compensation.	LAC or BAPEDA									■	■	■
8	Monitor and report on SLRARP/LARAP implementation.	DSC/ BAPEDA / PMU									■	■	■
9	Review ABBREVIATED LARAP/LARAP monitoring report / issue NOL for civil works contract	DSC DGH WBank											■

Note: For an ABBREVIATED LARAP the process from identification of PAPs to completion of compensation agreements and an implementation schedule, should take no more than 2 months. The disbursement of the compensation depends on GOI actions but should agree with the schedule.

4.9 SOCIAL IMPACT MITIGATION AND MONITORING

- The abbreviated LARAP and LARAP process requires the definition of mitigation and monitoring measures and their listing in an implementation schedule, defining when the measures designed to mitigate land acquisition and relocation impacts must be started and completed. The implementation schedule, together with other sections of the LARAP, will guide the type and timing of the delivery of all mitigation measures and monitoring actions. As part of the abbreviated LARAP/LARAP documentation, monitoring and reporting tasks during and after the completion of all compensation actions will also be added to the implementation bar chart.
- The PMU or its designated representative in the field will be required to submit short monitoring reports, describing the delivery of the compensation package to each PAP/PAH as per the implementation bar chart. The monitoring of the LARAP/abbreviated LARAP process will be undertaken by an independent monitoring team.

4.10 LANGUAGE OF ENVIRONMENTAL AND SOCIAL DOCUMENTATION

- English translations required will be short executive summaries for each SPPL, UKL/UPL, AMDAL and LARAP. The main documents will be prepared in Bahasa Indonesia.

4.11 INSTITUTIONAL ROLES AND RESPONSIBILITIES FOR ENVIRONMENTAL AND SOCIAL MANAGEMENT

1. All subprojects are to be identified and prepared in a manner that is fully compliant with the provisions in this ESMF document.
2. **Directorate General Highways (DGH)** - through the Project Management Unit (PMU) as the implementing agency for this project supported by its Sub-Directorate of Environmental Affairs is responsible for implementing the measures in this ESMF. A Core Team of Consultants (CTC) will provide Technical Assistance to the PMU to fulfil this responsibility. The CTC will assist the PMU with the detailed preparation of AWP2 and AWP3 and will further assist the PMU in the management of the Design and Supervision Consultants (DSC).
3. **Design and Supervision Consultants (DSC)** - The DSC will undertake all required subproject field surveys, environmental investigations and social studies according to the requirements of this ESMF, the provisions of relevant World Bank policies and Indonesian Government laws and regulations. This would include undertaking the detailed engineering designs, preparation for the Amdals, UPL, UKL, SPPL as required under Indonesian procedures, preparation of the LARAPs and abbreviated LARAPs as necessary and responsibility for including the design stage mitigation measures specified in the Amdal/UPL and UKL, and the ECOPs in the engineering design and all civil works contract documents such as the design drawings, the technical specifications, the Bills of Quantities, and the SEC's (Annex 5) in the contract clauses and the Request for Proposals (RFP's). Furthermore, during implementation of the civil works contracts, the DSC will be responsible for supervising all aspects of the civil works contracts, including financial, technical, environmental and social issues and produce and compile monthly monitoring reports. These will be included in their terms of reference which will be reviewed and cleared with the World Bank.
4. **Civil Works Contractors** – will be responsible for implementing the measures in the Amdal, and/or UPL, UKL, SPPL, and the ECOPs. The civil works contractors will price for these measures in their bids and will be held accountable for implementing them.
5. **Local Environmental Agencies and other Authorities** - will carry out their responsibilities in line with the Indonesian environmental protection and management measures system which include reviewing and approve all documents produced by the project and for supervising their implementation. The DGH will send the sub project environment monitoring reports prepared by the DSC's to the local environment agencies for their review and records.
6. World Bank's "No Objection" to contract award will require that (i) documentary evidence of the satisfactory completion of implementation of abbreviated LARAP or LARAP programs be provided and (ii) inclusion of the ECOPs in the civil works contracts for each sub project in each work plan.

4.12 BUDGET FOR IMPLEMENTATION OF THE ESMF

1. The fees for the DSC are included in the project costs under component 2, Implementation Support. The contractors cost for implementing the measures

contained in the ESMF will be included in their civil works contracts, included under Component 1. Betterment and Capacity Expansion of National Roads.

PART II – LAND ACQUISITION AND RESETTLEMENT POLICY FRAMEWORK (LARPF)

5. DEFINITIONS

The definitions used in this Policy Framework are:

1. “Project” refers to the WINRIP (Western Indonesian National Road Improvement Project) and includes all Project components, sub-projects and activities as described in the Loan Agreement between the Government of Indonesia (GoI) and the World Bank.
2. “Sub-Project” is a part of the project where physical infrastructure activities fall within the authority areas of the Provincial and Kabupaten/Kota Governments.
3. “Government” means the Government of the Republic of Indonesia.
4. “Provincial Government” refers to one of the regional Governments in Sumatra, western Indonesia.
5. “Kabupaten/Kota Government” refers to the Governments of Regencies (*Kabupaten*) or Cities and Towns (*Kota*) within the Provincial Government.
6. “Project Affected Persons”(PAPs) are people, institutions, or business units affected by land acquisition of the Project, and includes the following: (i) persons who will have to relocate as a result of land acquisition for the Project; (ii) persons who lose land and/or other assets taken for the Project temporarily or permanently; and (iii) persons who lose income and/or their livelihoods as a result of land acquisition for the Project.
7. “Physically Displaced Persons“, are people affected by the Project who have to relocate because: (i) the remaining lands or buildings are not sufficient for shelter or work place; or (ii) the remaining land is less than 60m²; or (iii) the remaining agricultural land is no longer adequate for cultivation.
8. “Land acquisition” means an activity by any level of Government to obtain land for the Project by means of compensation to parties who release land, buildings, tree crops and/or other assets related to the land.
9. “Compensation” means replacement of land at replacement value, either with land-for-land of equivalent size or productivity, or payment of cash equivalent to the full replacement value. If land is not available or the PAPs choose cash, compensation includes the replacement value of buildings, plants and/or other assets connected with the land impacted by land acquisition activities of the Project.
10. “Resettlement” means an effort or activity to relocate the Project Affected Persons to a new location that meets their requirements for settlement and that enables PAPs to develop a better or equal life compared to their previous living situation.
11. “Relocation Assistance” means the assistance provided to displaced persons/families that covers: (i) the costs of moving from their previous location to a new location; and (ii) an allowance equal to the local average living costs if a transition period is needed to resettle in a new location of residence or business.
12. “Resettlement Assistance” means an effort/activity to improve the economic and social skills of PAPs so that they can improve their standards of living or at least

achieve equal standards of living to their previous situation, as measured before sub-project implementation. Resettlement assistance includes efforts to handle difficulties during the transition period.

13. "Tracer study" means a due diligence study that is conducted to ensure proper procedures according to World Bank OP 4.12 have been carried out and that outcomes are what would have been expected under this policy framework in the event that land acquisition and/or resettlement has occurred in an area of a sub-Project before the appraisal date.

6. GENERAL PRINCIPLES

1. Involuntary resettlement should be avoided where feasible, or minimized to the extent possible. During the sub project preparation process, consideration of technical options shall involve a concurrent assessment of potential associated land acquisition impacts, so that, where feasible, design alternatives to minimize such impacts can be identified as early as possible.
2. Where it is not feasible to avoid resettlement, PDPs should be assisted in their efforts to improve their livelihoods and standards of living or at least equal to those with their previous living situation.
3. PAPs will receive proper compensation based on a calculation of the real replacement cost of the assets they lose as a result of the sub-project. Any affected assets and all eligible persons will be compensated.
4. PAPs should be fully consulted and should receive proper information of their rights and be provided with opportunities to participate in the planning and implementation of land acquisition and resettlement.
5. If the PAPs and Local Government are unable to come to an agreement on a resettlement action plan after more than a year, the sub project will be removed from the WINRIP program.
6. If the PAPs number less than 200 people (40 households, or HHs), or if less than 10 % of productive assets are lost and no people are physically displaced, an abbreviated LARAP can be done. Otherwise a full LARAP will be required. However, the specific requirements for an abbreviated or full LARAP in particular sub projects should be reviewed on case-by-case basis.
7. This Policy Framework provides guidelines and a set of procedures of Land Acquisition and Resettlement for PAPs appropriate to their social and economic conditions.
8. In case that consensus is not reached regarding the sum of compensation between PAPs and the Land Acquisition Committee (LAC) after more than a year, the sub-project will be excluded from WINRIP Program or will seek alternative to do realignment.
9. This RPF applies to all WINRIP sites (sub-projects) and all linked projects. A linked project is defined as one that is: (a) directly and significantly related to WINRIP; (b) necessary to achieve its objectives; and (c) carried out or planned to be carried out contemporaneously with WINRIP. There is only one linked site identified in the known 21 road segments and 4 bridges. In the event of any changes to the Project, or in the event that the contingent component for disaster risk reduction is activated, then a

further analysis will be done on any newly identified activities and this LARPF will apply to all such activities and any linked projects. DGH hereby commits to complying with the requirements of this LARPF for Sub-Projects considered linked by the World Bank.

10. There is only one linked site identified in the known 21 road segments and 4 bridges. In the event of any changes to the Project, a further analysis will be done on any newly identified activities and the LARAF in this ESMF will apply to all such activities and any linked projects.
11. Based in initial screening, in one case, a bridge (Air Magnia Bridge) is located within the Krui-Biha road section sub-project included in WP-1. The improvement of this bridge is not included in WINRIP list of sub-projects because DGH intends to finance the replacement of this bridge using its own budget. This bridge is considered a linked project within the definition provided above. Therefore the DGH will apply the requirements of the ESMF to this bridge. This LARPF requires that an assessment be carried out on the Air Magnia bridge and that a LARAP be prepared and disclosed if any resettlement as defined in the LARPF will occur as a result of works on that bridge. If a LARAP is required, all assistance and compensation under any such LARAP must be completed prior to the commencement of construction on the Air Magnia bridge. Although no similar situations are anticipated in WP2 and WP3, if the World Bank determines that any sub-project is linked, the DGH will apply the requirements of this LARPF to that sub-project.

7. PREPARATION, APPROVAL AND IMPLEMENTATION OF LARAP

1. *Preparation and approval of the Land Acquisition and Resettlement Action Plan (LARAP).* The DGH will prepare a LARAP or an abbreviated LARAP, depending on the anticipated impacts of land acquisition for a Sub-Project.
2. The LARAP or the abbreviated LARAP will be prepared in collaboration with or by the Local Government. The DGH will ensure that these documents are consistent with this LARPF before submitting it to the World Bank for approval.
3. The World Bank will provide a No Objection Letter (NOL) if the LARAP is found to be consistent with the LARPF. After the World Bank's approval, the local authorities (*Bupati* or *Walikota*) and/or any other government authorities with obligations under the LARAP will confirm in writing that they are committed to comply with such obligations, including the provision of adequate budgets for activities under their responsibility. The land acquisition process can start only after the LARAP has been approved by the World Bank.
4. *Implementation of Resettlement Instruments.* During the implementation of the LARAP or abbreviated LARAP, the appropriate government authorities will provide regular reports on the progress to the Project Management Unit (PMU), which will forward those reports to the World Bank. The World Bank will issue a NOL for physical construction of a Sub-Project once land acquisition is complete and the PAPs have been compensated according to the LARAP. Construction can commence after the PAPs have accepted the compensation offered and "relinquished" or "submitted" their rights to the land and assets taken for the Project.

8. SOCIO-ECONOMIC SURVEY, INFORMATION AND CONSULTATION

8.1 SOCIO-ECONOMIC SURVEY AND INVENTORY OF ASSETS LOST

1. As part of the planning and land acquisition process, the relevant level of Government will conduct a survey to: (i) define the areas affected by the Sub-Project by making the drawing alignment; (ii) collect basic socio-economic data on the PAPs; and (iii) identify the impacts on each PAP (or affected family) with regard to all assets lost and whether they will be displaced. The survey will constitute the baseline against which implementation progress will be monitored.
2. The socio-economic survey should be conducted after project designs are provided or at least after the road corridor alignment is determined.
3. The date of the socio-economic survey will be the latest cut-off point at which to record the persons in the Project area who will receive compensation, resettlement and resettlement assistance. In case there is a time gap between the LARAP approval and the implementation of the WINRIP project or sub-projects under WINRIP, the LAC will conduct verification of the current situation based on the list of affected people and assets from the survey.
4. The **socio economic survey** will be a detailed description about the socio-economic conditions of PAPs completed before the sub-Project is implemented. The survey should include such information as:
 - a. Social characteristics of all PAPs and households: numbers, age, gender, education, job, standard of living, time of stay;
 - b. Information about vulnerable groups, such as low-income groups, female-headed households, elderly, orphans, minorities, and handicapped, those without legally protected title to land, and other marginal groups;
 - c. Land tenure and transfer systems including patterns of authority over land;
 - d. Sub-Project impacts on the PAPs' patterns of economic and social activity, including impacts on social networks and social support systems;
 - e. Where resettlement is taking place and PAPs are relocated to new locations, the capacity of services (schools, medical) in the host community to accommodate the resettlers should be assessed.
5. The **inventory of assets lost** will record for each PAP (or affected household): (i) the total size of plot affected, the area to be acquired for the sub-project, the area of the residual land, and the legal status of lands to be acquired; (ii) structures affected indicating the percentage of the structure to be affected by sub-project; (iii) description of land use on the lot affected, i.e. residential, commercial, agricultural; (iv) number of other affected assets (crops, trees, well, etc); and (v) any other relevant information, such as whether the PAPs will be displaced, etc.
6. The socio-economic survey and inventory of assets lost will include all PAPs, and will form the basis of information for all land acquisition, resettlement and resettlement assistance processes involved with the Project.
7. The replacement cost of land will be determined on the basis of an appraisal carried out by Independent Land Appraising Institutions appointed by District Heads. In case where there is no Land Appraising Institution in the district where the project is located, the District Head establishes a Land Appraisal Team.
8. The results of the survey and the affected asset inventory will be announced in publically accessible places, such as the village (*desa*) or urban ward (*kelurahan*) office or the Project office to provide opportunities for asset owners to submit any and all objections.

8.2 INFORMATION, AWARENESS, AND CONSULTATION

1. Local Government will conduct intensive awareness campaigns among PAPs to provide information about planned sub-Project activities, possible sub-Project impacts, and compensation and resettlement options.
2. Awareness and consultation will be conducted together with the socio-economic survey among all PAPs and related stakeholders. These activities can be conducted through open discussions, Focus Group Discussions (FGDs), dialogue, or other ways appropriate to local condition. Care should be taken to ensure consultations include vulnerable and marginal groups.
3. The purpose of the consultation is to accommodate the opinions, aspirations, and suggestions of PAPs and related stakeholders about the land acquisition and resettlement policy and strategies.
4. The consultation process should be recorded and provided in LARAP (sample of documentation form is shown in Figure 8.1 and 8.2).

Figure 8.1 FORM OF MINUTES OF CONSULTATION AND SOCIALIZATION

No	Description	Explanation
A.	Venue of Meeting	
B	Objective of Meeting	
C	Those present from the project (the proponent)	
D	Community members in attendance: <ul style="list-style-type: none"> • Community leaders who attended • Residents • The number of those present 	
E	Issues that arise (can be any question or whatever)	
F	Agreed follow-up	

Figure 8.2 SAMPLE FORM OF MONTHLY MONITORING OF LARAP IMPLEMENTATING

Regency/Municipality:

Sub-project:

Reporting Period:

Activity	Work Plan of LARAP		Progress Report ⁵		Remarks
	Date	Target	Progress/ Status in the field	Problem & Planned Follow- up	
CONSULTATION					
1. Compensation ⁶					Attach: Copy of Agreement
2. Relocation ⁷					Attach: copy of published relocation schedule
IMPLEMENTATION					
1. Payment of compensation/benefit/s everance pay including relocation cost					Attach: copy of receipt
2. Relocation location preparations for:					
- Number of houses					
- Number of kiosks					
- Number of facilities (Mosques, Schools, health center)					
- Number of public facilities (electricity network, water)					
3. Relocation					
- Number of people relocated					
- Number of facilities					
- Number of public utilities					
4. Land certification					Attach: copy of certificate
- Number of new certificate at relocation area					
- Number of revised certificate					
5. Complaint					Attach : - List of complaints submitted
- Number of received complaints					
- Number of complaints accomplished					Attach: - copy of

⁵ If the column is not sufficient, please use additional blank paper

⁶ Consultation for compensation is about (1) market Price, (ii) compensation payment Schedule, and (iii) assets ownership, amount and the form of compensation

⁷ Consultation for relocation is about (i) relocation schedule, (ii) relocation location, (iii) relocations of facilities (such as mosque, school) and public facilities

Activity	Work Plan of LARAP		Progress Report ⁵		Remarks
	Date	Target	Progress/ Status in the field	Problem & Planned Follow- up	
					responses sent

8.3 INDEPENDENT ORGANIZATION

1. In conducting the socio-economic survey activity described in sub-chapter 4.1, Local Government will involve independent institutions that have strong previous experience in conducting surveys and community development work.

8.4 LAND ACQUISITION AND RESETTLEMENT ACTION PLAN (LARAP)

1. Based on the results of the survey described in sub-chapter 4.1, the appropriate level of Government prepares a comprehensive LARAP or abbreviated LARAP depending on the level of possible impact as described in section 2, paragraph 6 above.
2. A full LARAP will contain the following elements :
 - a. Description of the sub-Project
 - b. Potential impacts of the sub-Project, including project activities leading to impacts and the areas of impacts;
 - c. Main objectives of the LARAP;
 - d. Findings of the socio-economic study and inventory of assets lost;
 - e. Institutional framework identifying the agencies responsible for planning, implementation, and monitoring of resettlement activities, and any steps necessary to enhance the capacity of those agencies to carry out resettlement activities;
 - f. Eligibility criteria for PAPs for various kinds of compensation and resettlement assistance;
 - g. Principles to be used in the valuation of assets;
 - h. Resettlement measures, including description of: the packages of compensation and other resettlement measures for each category of eligible persons; site selection; preparation and relocation strategies for those PAPs that will be relocated to new sites; housing, infrastructure and social service provisions; environmental protection and management where appropriate; and mechanisms of community participation in the resettlement process (including host communities);
 - i. Grievance procedures;
 - j. Implementation schedule, including costs and budget;
 - k. Monitoring and evaluation arrangements.
3. If the number of PAPs totals less than 200 persons, or if less than 10% of all assets owned by PAPs are affected by the sub-Project, an abbreviated LARAP may be prepared in lieu of a full LARAP. An abbreviated LARAP will contain, at a minimum, the following elements:
 - a. Census survey of PAPs, assets lost, and valuation of assets
 - b. Compensation and rehabilitation assistance description;
 - c. Consultation with PAPs about compensation alternatives;
 - d. Institutional responsibility for implementation and procedures for grievance redress;
 - e. Arrangements for monitoring and implementation; and

- f. Schedule and funding.
4. The LARAP will be prepared by the appropriate level of government to be delivered to the WINRIP secretariat, Public Works Ministry, which, after review, will submit the LARAP to the Bank for review and clearance. After World Bank approval, the LARAP will be formally issued as a Bupati/Walikota Letter.
5. The World Bank will issue a NOL for procurement to proceed for the sub-Project once land acquisition is complete and all payments of compensation completed. Proof of acquisition completion and payment of compensation will be required. World Bank NOL for contract award will be issued after documentary evidence is received that all PAPs have received compensation as established by the LARAP.
6. During implementation of the LARAP the appropriate level of government will provide regular progress reports to the WINRIP Secretariat which will forward those reports to the World Bank.

8.5 TRACER STUDY

1. If a sub-Project included on the list of the Project Implementation Plan (PIP) is proposed for WP1, 2 or 3 and land acquisition for the sub-Project was conducted before the date of appraisal by the local government without a LARAP approved by the Bank, a “tracer study” shall be conducted to evaluate whether the land acquisition has been well implemented appropriate with the guidelines set forth by the LARAP signed by the Government and the World Bank. The Tracer Study will evaluate PAP conditions before and after the land acquisition. Any sub-Project in the PIP for which land acquisition began subsequent to the date of appraisal will not be considered for funding without preparation of a satisfactory LARAP. For sub-Projects under WP1 the process is already completed.

9. LAND ACQUISITION

9.1 COMPENSATION

1. PAPs will receive fair compensation calculated at real replacement cost. Replacement costs cover: (i) *Land*, which is determined on the basis of appraisal carried out by licensed appraisers, with the costs of any registration and transfer taxes borne by the Government; (ii) *Housing and other affected buildings*, with replacement costs determined by material market prices used as reference for the construction of replacement buildings similar to affected buildings, the repair of partially affected structures, plus the costs of transporting building materials to the new construction site, plus the costs of any labour and contractor fees, plus the cost of registration and transfer taxes. In determining these replacement costs, depreciation of assets and material salvage value are not countable, nor are lost assets affected by value added as a result of project activities.
2. Compensation for trees, plants and other assets are to be negotiated based on established price standards for various kinds of trees and cash crops.
3. Follow up monitoring and evaluation of the implementation of the compensation process will be conducted to make sure that PAPs receive their compensation as described in the LARAP. Monitoring will be conducted by a local independent institution (such as a higher level education institution or other civil society group) and will include a census or sampling survey depending on the number of HH affected by project. The report and recommendation will be made publicly available.

9.2 RELOCATION ASSISTANCE

1. Displaced persons/families will be assisted with regard to:
 - a. the costs of moving from their previous location to a new location;
 - b. an allowance equal to the local average costs of living if a transition period is needed to resettle in a new location of residence or business (e.g. during the time it takes to build a new house/business).

9.3 REHABILITATION ASSISTANCE

1. In addition to the compensation for land, buildings, and fixed assets, PAPs who have suffered an income or welfare loss due to the displacement (e.g. job loss) caused by the sub-Project will receive rehabilitation assistance to assist them in re-establishing or improving their livelihoods in the new environment. Rehabilitation assistance can be provided in parallel with sub-Project construction and implementation.

9.4 COMPENSATION ALTERNATIVES

1. Based on agreements reached at the negotiation, eligible PAPs can choose to receive cash compensation or land replacement.
2. Physical displacement may include provision of serviced sites, land swaps, low cost housing, real-estate housing provided through a Bank Tabungan Negara (BTN) credit facility, or other schemes organized by the appropriate level of Government.
3. PAPs can also form cooperative housing groups to construct housing. For this option the Local Government will coordinate with relevant institutions to provide service and rehabilitation assistance as needed.
4. The PDPs will not bear the costs of depreciation of their buildings, and charges or taxes related to the relocation or compensation.
5. PAPs can take and bring their salvaged building materials to the new site.
6. Cash compensation must be given to PAPs before their move to a new location or the destruction of their old building.

9.5 CATEGORIES OF PROJECT AFFECTED PERSONS

1. Those possessing legal land certificates and have documentation proving ownership. This includes persons holding *girik* documentation (land transfer documents or other legitimate proof), or persons with proof that they are recipient of Islamic public social land (*natzir*) or are holders of *adat* (local customary law) rights (individual or communal);
 - a. These PAPs will receive compensation for the land, building, and fixed assets appropriate with ownership status and its environmental condition;
 - b. PAPs described in sub-chapter 4.4, who are displaced by the Project, can choose to receive cash compensation or the other options as described in section 4.4.

- c. The lots at the resettlement site will have land title of the same level or higher (whenever possible) than they previously had, and the certificate will be issued within 6 months after displacement of the physically displaced persons.
 - d. PAPs will receive transport allowance to move themselves and their belongings.
 - e. PAPs who suffer an income decline due to resettlement will also receive rehabilitation assistance to increase their ability to improve their lives.
2. Those who occupy land in a residential, commercial, or industrial zones in the Project area, but do not hold a certificate or legal title;
- a. PAPs who are recorded in the baseline survey and who occupy land in a residential, commercial, or industrial zone in the Project area, but do not hold a land certificate, girik, or hak adat, will receive compensation for land, buildings, and fixed asset affected by the sub-Project according to the length of their stay and the replacement value of the assets.
 - b. PDPs can choose to receive cash compensation or the other options as described above.
 - c. The lots at the new site will have *Hak Pakai* (user rights) or a higher land title, and the certificate will be issued within 6 months after the displacement.
 - d. PAPs will receive transport allowance sufficient to move their belongings.
 - e. PAPs who suffer an income decline due to resettlement will also receive rehabilitation assistance from the Local Government to increase their ability to improve their lives.
3. Those who occupy public land on sites such as rivers, roads, parks, or other public facilities in the Project area
- a. PAPs who are recorded in the socio-economic survey as occupying areas that are clearly delineated as public lands such as railways, under bridges or fly overs, etc., will receive allowance and other rehabilitation assistance from the Local Government.
 - b. In cases that: (i) the public area has been occupied for long periods of time without any sanctions from the Government, (ii) people occupying the land have received recognition from the government by incurring the obligation to pay land tax or fees, or (iii) a *camat/lurah* agreement has been effected on land transactions such that it is no longer clear that the land is public land, then the PAPs should receive compensation based on the recommendation of the socio-economic survey.
4. Those who are renters.
- a. PAPs who are renters, and are recorded in the socio-economic survey, will be assisted in finding a rental house, or a housing site of similar size to the one lost, which can be rented or rent-purchased through affordable instalments.

9.6 LAND DONATION

- 1. Land donations will not be acceptable.

9.7 RESETTLEMENT SITE

- 1. The resettlement site provided for relocating PDPs will include adequate infrastructure and public facilities to promote the development of a good social and economic life, including:
 - a. Road or footpaths as necessary;
 - b. Drainage systems;

- c. Water supply (if a piped water distribution network is not available, there should be wells that comply with health standards);
 - d. Electricity;
 - e. Access to health, education, work place, religious service, and sport facilities in accordance with the size of the new community; and
 - f. Access to public transport facilities.
2. The location reserved for resettlement as described in point 1 of this sub-chapter will be widely publicized so that the general public will be well informed.
 3. PDPs will be informed of the completion of the resettlement site at least one month before relocation, and they will be invited to survey the new site.
 4. PDPs will move to the new site after the infrastructure and facilities at the resettlement site are completed and feasible to live in as confirmed by the Project supervisor and local community leader.

10. LIVELIHOOD RESTORATION ASSISTANCE

10.1 TYPES OF ASSISTANCE

1. PAPs whose job, income, or living are disturbed by the Project or are physically displaced will receive assistance to improve their standard of living or at least to maintain it at the level before the implementation of the sub-Project.
2. The assistance program will give priority to vulnerable community members and groups, including women headed households.
3. In implementing the assistance care should be taken to smoothly integrate the newly resettled people with the host community in the resettlement area.
4. The assistance can be linked to existing programs and resources.
5. Resettlement/rehabilitation assistance may include one or more of the following
 - a. Allowances;
 - b. Motivation development;
 - c. Skill and vocational training;
 - d. Assistance to start and develop small businesses;
 - e. Small scale credit;
 - f. Marketing development;
 - g. Strengthening of community based organization and services;
 - h. Conflict resolution and mediation;
 - i. Training to promote gender equality, such as woman access and participation in decision making;
 - j. Health training about the environment, reproduction, and HIV/AIDS.

10.2 ASSISTANCE SCHEDULE AND COST

1. For those PAPs to be relocated, the assistance will start during the consultation prior to displacement. The program should be limited only in one year budgeting but can be conducted in several years appropriate with PAP needs.

2. Funds for the extended assistance will be reserved from the Project funds or other sources as defined by the Bupati/Walikota in the LARAP.

11. INSTITUTIONS AND FUNDING

11.1 LAND ACQUISITION COMMITTEE (LAC)

1. The various activities described above will be implemented in coordination with the Land Acquisition Committee (LAC) set up by each Local Government.

11.2 HEAD, MEMBERS, AND TASKS OF THE LAND ACQUISITION COMMITTEE

1. The LAC will be chaired by the local Regent (*Bupati*) or Mayor (*Walikota*), along with members from the relevant agencies in the Local Government (e.g. Land Agency, Technical agency requiring the land, Administrative Agency);
2. The tasks of the LAC include are to:
 - k. Inform and consult the PAPs on plans for sub-Project plans;
 - l. Appoint licensed land appraisers or institutions or to form Land Appraisal Team to appraise land price for compensation;
 - m. Conduct an inventory of assets to be acquired;
 - n. Disclose the inventory of affected assets in locations easily accessible to PAPs;
 - o. Negotiate and reach agreement on compensation with PAPs.

11.3 CONSULTATION AND ASSISTANCE BY INDEPENDENT INSTITUTION

1. In the planning and implementation phase, especially related to information dissemination, awareness raising, consultations and assistance to the community, the LAC will be assisted by independent institutions which are experienced in LARAP requirements and community development. They should be experienced in community development and outreach affairs and they should be able to integrate various sectoral activities at the community level.
2. Transparency and consultation should be strengthened to solve local problems quickly and effectively.

11.4 COORDINATION BETWEEN BAPPEDA AND LAC

1. The Regional Body for Planning and Development (*Badan Perencana Pembangunan Daerah*, or Bappeda) should act as the main coordinator handling all environmental and social matters connected with public works. This would include consultation, land and building acquisition and compensation, resettlement, and rehabilitation assistance. Bappeda should also be responsible for liaison with all stakeholders and non-governmental organizations
2. Intensive communication and coordination should be developed between the Regional Environmental Impact Management Agency (*Badan Pengendalian Dampak Lingkungan Daerah*, or Bapedalda), Bappeda, and the LAC. Joint meeting coordination will be conducted at least once each month.
3. The Bupati or Walikota and other related officials will conduct monthly evaluations on the process of land acquisition, resettlement and rehabilitation assistance.

4. The Provincial Government together with its related institutions will monitor and assist the Local Government in conducting community rehabilitation assistance as describe on this Framework Policy.

11.5 COORDINATION WITH THE WINRIP PMU

1. Reports and funding sources for the implementation information campaign, consultation, assistance, and resettlement as described in this LARPF shall be coordinated with the Project WINRIP at Local Government in related Province.
2. General arrangements will be covered in the Project Implementation Plan. The details of the cost and funding sources will be covered in the LARAP which will be determined by the Bupati/Walikota as agreed by the relevant funding sources.
3. The PMU-WINRIP in the related province will provide the proposed LARAP to the WINRIP Secretary, Public Works Ministry to be furnished to the World Bank for review and approval.
4. Independent institutions will be retained as required by the Project and/or Bank to periodically carry out external monitoring and evaluation of the implementation of the LARAPs.
5. The World Bank may carry out an inspection of the site or location of candidate sub-projects with prior notification to The Executing Agency (PPU/PMU) although the inspection can be conducted independently. The result of inspection, which shall be discussed with related local government agency, shall be informed to the Executing Agency.

12. MONITORING AND EVALUATION

12.1 INTERNAL MONITORING AND REPORTING

1. Internal monitoring and reporting on the preparation and implementation of LARAPs and abbreviated LARAPs will be undertaken by the Monitoring team, which will be comprised of representatives from Local Government, PAPs, and Non-Governmental Organizations (NGOs), civil society, or Universities on a monthly basis and will include:
 - a. Information on consultations held during LARAP preparation and implementation;
 - b. Information on the delivery of compensation and rehabilitation entitlements as stipulated in the LARAP comprising (i) the timely provision of compensation to individual PAPs, and (ii) the timely provision of rehabilitation assistance (relocation and income restoration assistance) to individual PAPs (see annex 2 for sample of monthly monitoring form).
 - c. Information on grievance redress.
 - d. The Socio-Economic Survey and Inventory of Assets Lost undertaken during the preparation of the LARAP will constitute the baseline for monitoring of implementation progress.
 - e. Monthly monitoring information on each sub project will be shared with the World Bank.

- f. Quarterly project report will include consolidated information on the status of LARAP implementation prepared by the PMU and submitted to the World Bank.
- g. The budget for internal monitoring will be borne by local government.

12.2 EXTERNAL MONITORING AND EVALUATION

1. By the Midterm Review and by Project closure, an evaluation based on the Terms of Reference (TOR) that is approved by the World Bank will be conducted by an independent consultant to assess: (i) whether the planned compensation and rehabilitation entitlements have been provided to the PAPs as planned in the LARAPs, and (ii) whether adequate income restoration measures were planned, and whether these have enabled the PAPs to at least restore their standard of living, or whether they still face serious problems which require further assistance.
2. If the PAP has not been able to overcome income and the standard of living problems, the Local Governments will provide an extension of the assistance.
3. The budget for External Monitoring and Evaluation will be borne by the Project.

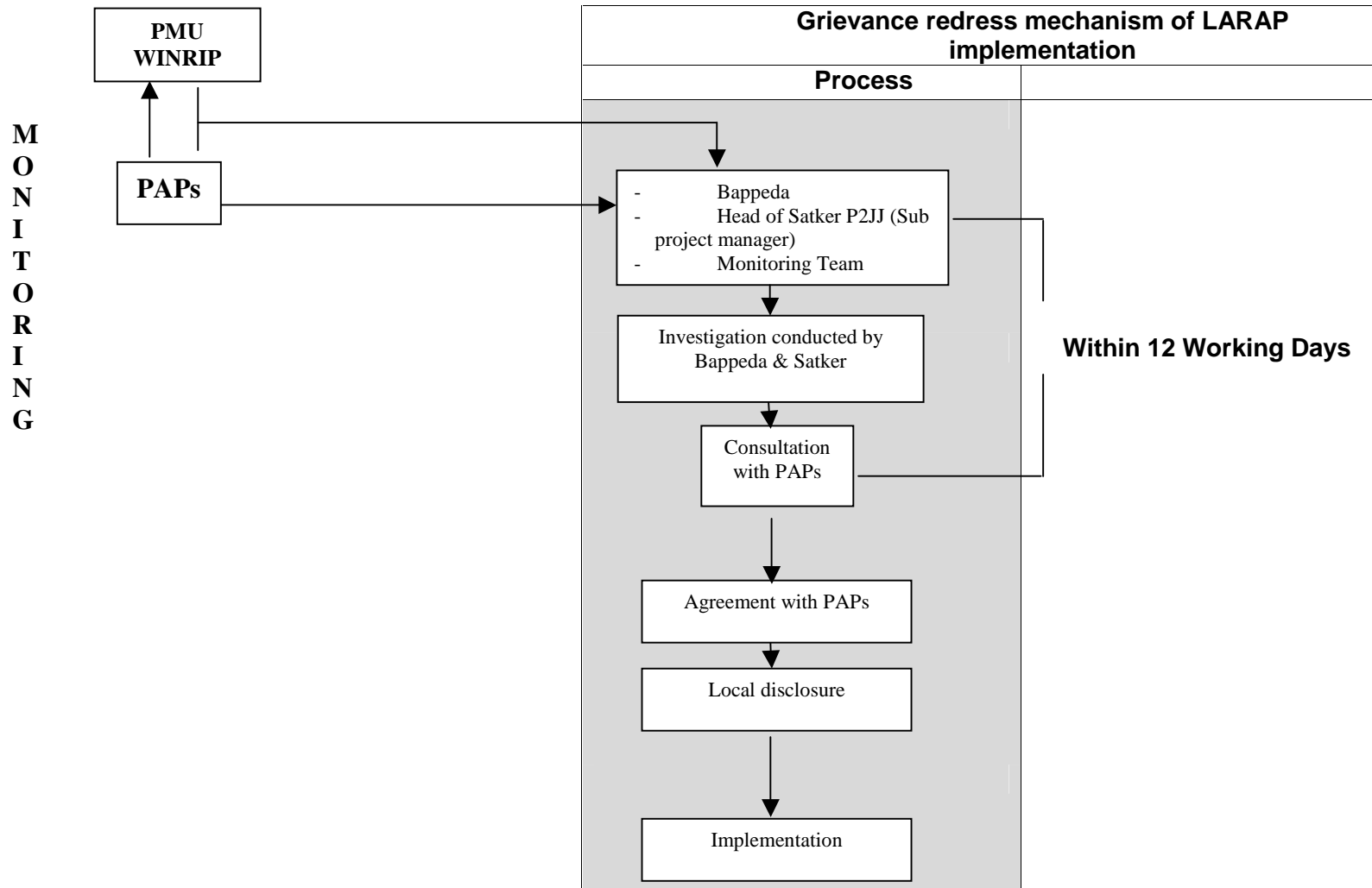
13. GRIEVANCE REDRESS MECHANISM

Grievance redress mechanism means to provide opportunity for PAPs to express their dissatisfaction and complaint. Complaints may express the discontentment against all aspect of LARAP preparation and implementation. The mechanism will follow stages below (see Figure 13.1):

1. PAPs can submit any complaints on LARAP preparation and implementation to Bappeda, the Monitoring Team, the sub-Project Manager, LAC or the PMU-WINRIP.
2. Based on the complaints, objections and proposal addressed by the affected people, Local Administration and PMU will conduct investigation and verification.
3. The result of the verification will be informed to project-affected people no later than 12 days for discussion with the affected people to look for solution and agreement.

In case of no consensus about the sum of compensation between the PAP and Local Government after more than a year, the sub-project will be excluded from WNRIP Program or will seek alternative to do realignment.

Figure 13.1: Flow Chart for Grievance Redress Mechanisms



ANNEX 1: FORMATS FOR UKL/UPL AND AMDAL STUDIES

A. UKL - UPL

Table of Contents for UKL/UPL ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN (UKL/UPL) (Based on Permen LH No. 13 Tahun 2010)

The UKL-UPL at least shall contain the following:

TABLE OF CONTENTS

LIST OF TABLES (at least 3 as shown): Table 1: Environmental Impacts; Table 2: Environmental Mitigation Plan; Table 3: Environmental Monitoring Plan.

LIST OF FIGURES (at least 3 as shown): Figure 1: Map of study location in context of surrounding area; Figure 2: Map of Environmental Impacts; Figure 3: Land to be acquired

LIST OF APPENDICES (at least 3): Appendix 1: Map of environmental condition; Appendix 2: Design drawings; Appendix 3: Photos of study area and site.

AGREEMENT APPROVAL LETTER FROM BLH/BLHD

I. THE PROPONENT

1. Name of company
2. Name of proponent
3. Address of proponent

II. PLAN OF ACTIVITY

1. Name of activity
2. Location of activity
3. The scale of activity
4. Size of activity plan component

III. ENVIRONMENTAL IMPACTS IDENTIFIED

Explain briefly and clearly regarding:

1. **Activities which will become the source of impacts to the environment;**
2. **Type of environmental impacts which will occur;**
3. **Units to describe the scale of impacts; and**
4. **Other issues to explain the environmental impacts which will occur.**
5. **Summary of impacts in the form of the following table:**

SOURCE OF IMPACT	TYPE OF IMPACT	SCALE OF IMPACT	REMARKS
(Write down the activity which will cause impact to the environment)	(Write down the impacts that are likely to occur)	(Write down the units which can describe the scale of impacts)	(Write down other information to explain the environmental impacts which will occur)

IV. ENVIRONMENTAL MANAGEMENT AND MONITORING PROGRAM

V. SIGNATURE

APPENDICES

B. AMDAL

Table of contents for ANDAL framework, ANDAL, RKL-RPL and Executive Summary refers to Permen LH No. 08 year 2006 as mentioned below:

**Table of Contents for AMDAL
Environmental Impact Assessment
(Based on Permen LH No. 08 Tahun 2006)**

KA- ANDAL Document:

- Guidelines for KA-ANDAL Preparation refers to Annex 1 Permen LH No. 08 year 2006

ANDAL Document:

- Guidelines for ANDAL Preparation refers to Annex 2 Permen LH No. 08 year 2006

RKL Document:

- Guidelines for RKL Preparation refers to Annex 3 Permen LH No. 08 year 2006

RPL Document:

- Guidelines for RPL Preparation refers to Annex 4 Permen LH No. 08 year 2006

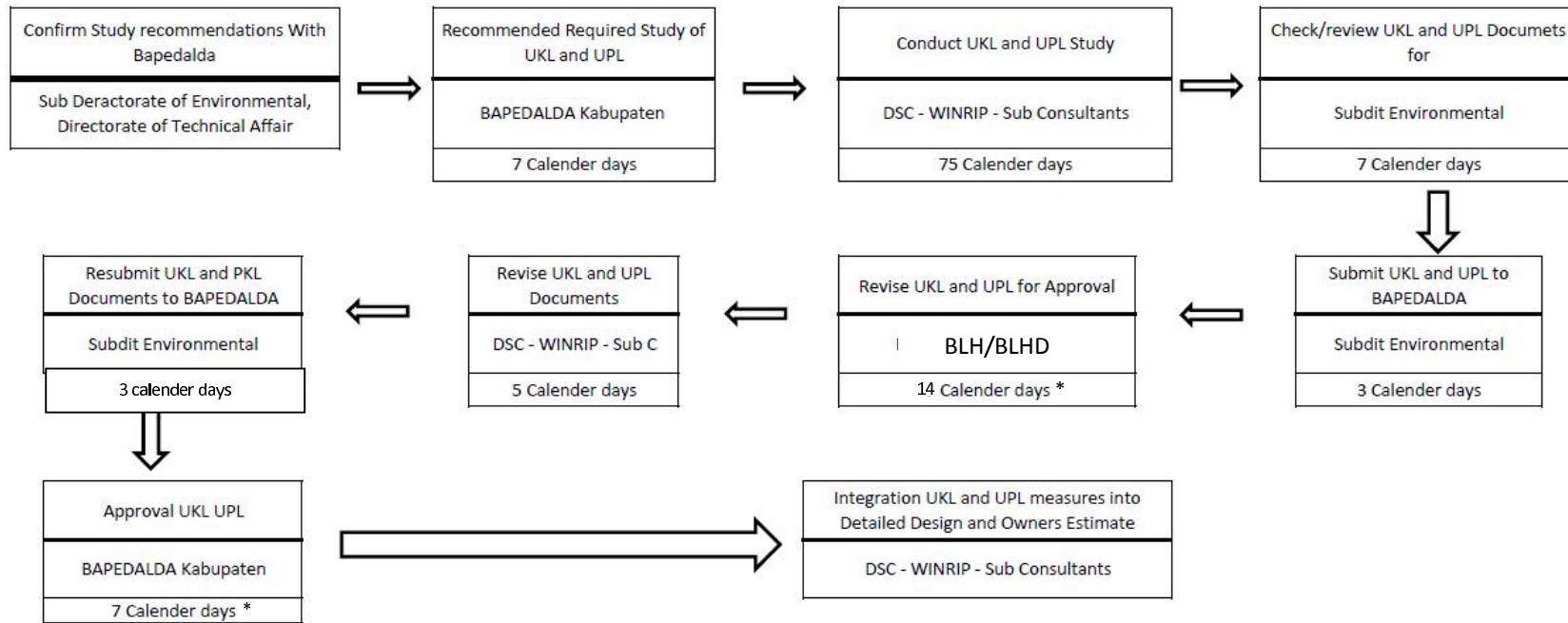
Executive Summary Document:

- Guidelines for Executive Summary Preparation refers to Annex 5 Permen LH No. 08 year 2006

ANNEX 2: PREPARATION OF DOCUMENTATION FOR UKL/UPL AND AMDAL STUDIES

PREPARATION OF THE UKL AND UPL DOCUMENTATION (Based on the KEPMENLH No. 86 Year 2006)

ANNEX 2.1

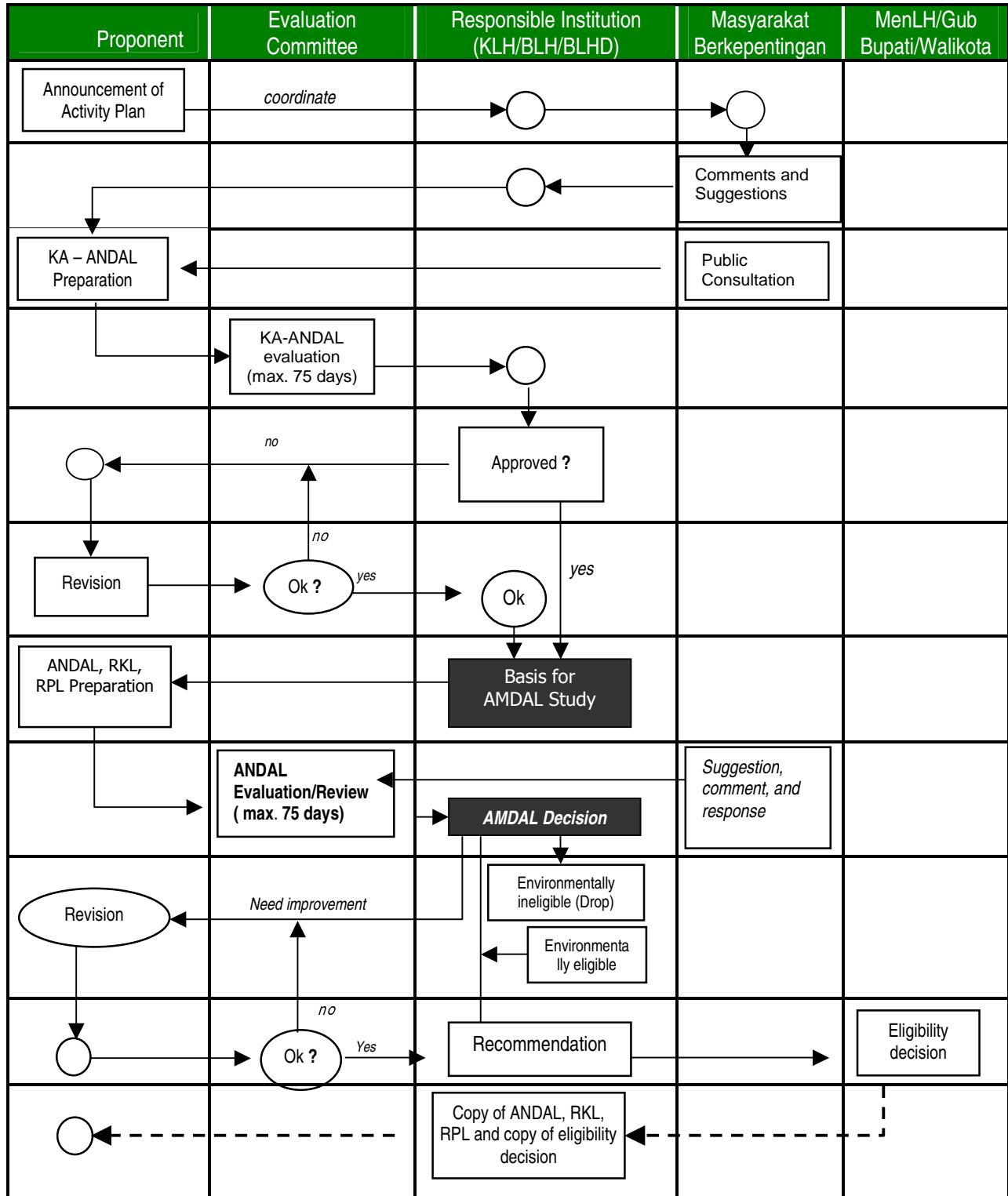


Note. * : Based on Permen LH No. 13 year 2010

AMDAL SCREENING, PREPARATION AND IMPLEMENTATION

Step	Description	Direct Responsibility	Time frame
1	Define AMDAL screening and study process.	PPC	Completed in FS Stage
2	Review / approve AMDAL screening and study proces.	Sub-Dit Environmental	Completed in FS Stage
3	Conduct screening process. Recommend Sub-Projects which may require AMDAL.	PPC	Completed in FS Stage & AWP
4	Review / confirm PPC recommendation for AMDAL study based on screening result.	Sub-Dit Environmental	Completed in FS Stage & AWP
5	Coordinate confirmation of the requirement to conduct AMDAL study with Bapedalda.	PMU	During AWP Preparation
6	Meet with or send letter to Bapedalda to confirm AMDAL study requirements.	DSC, Sub-Dit Environmental	During AWP Preparation
7	Prepare AMDAL study budget and schedule. Recommend qualified consultants.	DSC	During AWP Preparation
8	Confirm AMDAL study budget / selection of consultants recommended by DSC.	DSC, Sub-Dit Environmental	During AWP Preparation
9	Supervise contractual requirements / conduct of AMDAL study by selected consultants.	DSC	During AWP Preparation
10	Prepare KA-AMDAL in accordance with UU No. 23/1997: PP No.27/1999 & KepMen LH No. 17/2004.	Selected AMDAL Consultants	During AWP Preparation
11	Review / endorse KA-AMDAL to Bapedalda for Approval.	Sub-Dit Environmental	During AWP Preparation
12	Review / Approve KA-AMDAL with Stakeholder Consultations and Public Disclosure in local newspaper (30 day review period)	Bapedalda	During AWP Preparation
13	Participate in presentation / review of KA-AMDAL.	Concerned Stakeholders	During AWP Preparation
14	Review / endorse Draft Final AMDAL for review / approval by bapedalda.	Sub-Dit Environmental	During AWP Preparation
15	Participate during presentation / review of draft AMDAL Report.	Concerned Stakeholders	During AWP Preparation
16	Review / approve AMDAL with stakeholder Consultation (60 day review period)	Bapedalda	During AWP Preparation
17	Ensure all required correction are made. Prepare brief (1 page) English summary of AMDAL.	DSC	During AWP Preparation
18	Confirm Bapedalda approval of AMDAL & check English summary of AMDAL for accuracy.	Sub-Dit Environmental	During AWP Preparation
19	Submit copies AMDAL, Bapedalda approval letter and English summary to World Bank	DSC	During AWP Preparation
20	Review AMDAL Documentation for ESS compliance, issue No Objection Letter (NOL)	PMU	During AWP Preparation
21	Provide Owners Estimate for implementing RKL / RPL for Bids.	PMU	During Bidding / Procurement
22	Review and approve Owners Estimate for RKL / RPL measures for use in Bid Documents.	PMU	During Bidding / Procurement
23	Confirm RKL / RPL implementation costs included in Bid Evaluations.	PMU	During Bidding / Procurement
24	Review RKL / RPL and include implementations costs and Bid.	Civil Works Contractors	During Bidding / Procurement
25	Provide Needed RKL / RPL training to P2IJ, Subproject Managers & Contractors.	DSC	At Start of Civil Works
26	Coordinate with Bapedalda in monitoring RKL / RPL implementation.	PMU	During Civil Works
27	Implement required RKL / RPL measures.	Civil Works Contractors	During Civil Works
28	Support RKL / RPL implementation & monitoring with bapedalda.	DSC	During Civil Works
29	Participate in monitoring according to RKL / RPL.	Bapedalda	During Civil Works
30	Participate during implementation in accordance with RKL / RPL.	Concerned Stakeholders	During Civil Works
31	Summarize reports on RKL / RPL implementation. Provide guidance to address problems / grievances.	DSC	During Civil Works
32	Supervise RKL / RPL performance of DSC. Respond to issues raised by Bapedalda, including any needed enforcement measures.	Sub-Dit Environmental	During Civil Works
33	Monitor sub-project performance. Review & approve any required RKL / RPL enforcement measures.	PMU	During Civil Works
34	Monitor Overall project performance & ESS compliance	DGH World Bank	During Civil Works

ANNEX 2.3 FLOW CHART OF KA-ANDAL AND AMDAL EVALUATION PROCESS



note:



= Document final destination to be processed or followed up

Source : PP No.27 year 1999 (articles 14 – 23)

ANNEX 3: REPORT FORMATS FOR LARAP AND SLARAP

List of Content
List of Table
List of Picture
List of Appendix

1. Project Description
2. Social Economic Study (necessary for full LARAP)
3. Census Survey of PAPs and assets lost
4. Compensation and resettlement assistance description, as well as income restoration measurement (necessary for full LARAP)
5. Consultation with PAPs about compensation alternative
6. Institutional responsibility for implementation and procedures for grievance redress
7. Arrangements for monitoring and implementation
8. Schedule and funding

Appendix

1. Project Map
2. Relevant Minutes of Meetings
3. Land Acquisition Map
4. Documentation of socialization meeting
5. Flow chart of Procedure for Grievance
6. Form of monitoring report
7. Other supporting data

ANNEX 4: ENVIRONMENTAL CODES OF PRACTICE FOR THE CONSTRUCTION OF THE SUB PROJECTS OF WINRIP

I. General

In order to prevent harm and nuisances on local communities, and to minimize the impacts on the environment during the construction and operation of the sub projects in AWP1, AWP2 and AWP3, the Contractor and his employees shall adhere to the mitigation measures set down in:

- The Indonesia Road Sector Environmental Management Guidelines consisting of the following four parts. (i) General Guideline for Road Sector Environmental Management, (ii) Planning Guideline for Road Sector Environmental Management, (iii) Implementation Guideline for Road Sector Environmental Management and (iv) Monitoring Guideline for Road Sector Environmental Management.
- The specifications, procedures, and best practices included in this Annex. These specifications complement any technical specifications included in the work quantities and the requirements of any other Indonesian regulations.

II. Environmental Duties of the Contractor

2.1 The duties of the Contractor(s) include but are not limited to::

- a. Compliance with relevant environmental legislative requirements in Indonesia;
- b. Work within the scope of contractual requirements and other tender conditions;
- c. Prior to construction commencement, the contractor shall submit to the Design and Supervision consultant (DSC) a Project Activity Safety Plan (PASP). PASP should cover an action plan in the event of adverse weather conditions or accidental leaks, spills or emissions.
- d. Organize representatives of the construction team to participate in the joint site inspections undertaken by the DSC, Bappedalda and any other independent monitoring consultants, and undertake any corrective actions instructed by the DSC;
- e. Provide and update information to the DGH regarding works activities which may contribute, or be continuing to the generation of adverse environmental conditions;
- f. Stop construction activities which generate adverse impacts upon receiving instructions from the DSC, BLHD, and propose and carry out corrective actions and implement alternative construction method, if required, in order to minimize the environmental impacts;
- g. Prepare Contractor's Compliance Reports to be ready at the end of the 4th, 10th, 16th weeks since construction commencement so that these reports become ready for the Project to access during their six monthly monitoring.
- h. Within six months from construction commencement, prepare the Contractor's Restoration Plans for Quarries, Disposal and Temporary Stockpiling sites and submit to the DSC for review and approval. These restoration plans should indicate the locations and the works the contractor shall carry out in order to maintain the landscape at these sites affected by the construction of the sub project road and/or bridge.
- i. Design and implement a Unit comprising of the Contractor's Chief Engineer or his deputy, and the Workplace Safety and Environment Officer whose responsibility described in Section IV below, to receive, process and reach

resolution on community complaints arising from construction activities. Records of such complaints and their resolution must be kept and be available for review by the DSC and DGH Staff.

III. Contractor's Program for Implementation of UKL and UPL (i.e. EMMP)

- 3.1 The Contractor is required to submit an EMP Implementation Program (EMPIP) as part of his proposed Construction Method Statements prepared as part of his Bid document and/or during construction phase. The Contractor's EMPIP shall provide details such as Contractor's commitment to environmental protection; methodology of implementing the project EMMP; detailed designs and installation locations of access roads and pollution control facilities (e.g. drainage channel, settling tank, etc) or mitigation measures; environmental monitoring program during different stage of construction period, and the contractor's proposed resources for the implementation of the EMMP.

IV. Contractor's Workplace Safety and Environmental Officer (SEO)

- 4.1 A Workplace Safety and Environmental Officer (SEO) working full time on-site will be appointed by each Contractor. The SEO is expected to have at least 3 years relevant working experiences regarding environmental management, training and monitoring in infrastructure construction projects. The SEO should be familiar with Indonesia's environmental requirements.
- 4.2 The SEO shall be responsible for implementation and management of the UKL/UPL program. The roles and responsibilities of SEO are, but not limited to, the followings:
1. Assist the DSC to conduct training on environmental awareness raising for the contractor's workers within two weeks since mobilization and refresh training at every six months. Conduct additional training as advised by the DSC.
 2. Carry out environmental site surveillance to investigate the Contractors' site practice, equipment and work methodologies with respect to pollution control and adequacy of environmental mitigation implemented;
 3. Monitor the implementation of environmental mitigation measures and the contractor' compliance with environmental protection, pollution prevention and control measures, and contractual requirements; Advice to the Contractor(s) on environment improvement, awareness, proactive pollution prevention measures;
 4. Carry out investigation and submit proposals on mitigation measures to the Contractor(s) in the case of non-compliance / discrepancies to UKL/UPL are identified. Participate in the monitoring and implementation of remedial measures to reduce environmental impact
 5. Review the success of the UKL/UPL to cost-effectively confirm the adequacy of mitigation measures implemented
 6. Prepare Contractor's Compliance Reports to be ready at the end of the 4th, 10th, 16th weeks since construction commencement so that these reports become ready for the DSC and DGH to access during their monitoring.

7. Incorporate UKL/UPL implementation progress into contractor's construction progress report
8. Complaint investigation, evaluation and identification of corrective measures.
9. Carry out additional monitoring works within the specified timeframe instructed by the DSC and/or DGH staff; and
10. Liaison and implement activities coordinated or instructed by the Contractor's Chief Engineer, Environmental Officer of the DSC, Provincial environmental authorities, local authorities and environmental monitoring consultants on all environmental issues as needed.
11. The Contractor(s) shall ensure adequate resources are available to the SEO for the implementation of the UKL/UPL throughout the construction phase.

V. Construction Activities and Environmental Rules for Contractor

The Contractor will prepare and enforce a Workers Code of Conduct to reflect the followings.

5.1 Prohibitions.

The following activities are prohibited on or near the project site:

- a) Cutting of trees for any reason outside the approved construction area;
- b) Hunting, fishing, wildlife capture and poaching, or plant collection;
- c) Buying of wild animals or their meat for food or any other purposes;
- d) Disturbance to anything with architectural or historical value;
- e) Building fires outside camp areas without being authorization;
- f) Use of firearms (except authorized security guards as applicable under national law);
- g) Use of alcohol by workers during working hours
- h) Washing car or machinery in streams or creeks.
- i) Doing maintenance (change of oils and filters) of cars and equipment outside authorized areas
- j) Littering of the site and disposing trash in unauthorized places
- k) Workers driving motorbikes without wearing helmets
- l) Control construction plants or vehicles by unauthorized person.
- m) Driving at speeds exceeding limits.
- n) Having caged wild animals (especially birds) in camps.
- o) Working without safety equipment (including gloves, boots and masks)
- p) Creating nuisances and disturbances in or near communities
- q) Disrespecting local customs and traditions
- r) The use of rivers and streams for washing of clothes.
- s) The use of welding equipment, oxy-acetylene torches and other bare flames where fires constitute a hazard.
- t) Indiscriminate disposal of rubbish or construction wastes or rubble.
- u) Spillage of potential pollutants, such as petroleum products.
- v) Collection of firewood.
- w) Urinating and defecating outside of the designated facilities.
- x) Burning of wastes and/or cleared vegetation.

5.2 Transport.

The Contractor shall use selected routes to the project site, as agreed with the DSC, and appropriately sized vehicles suitable to the class of roads in the area. The contractor shall restrict loads to prevent damage to local roads and bridges used for transportation purposes. The Contractor shall be held responsible for any damage caused to local roads

and bridges due to the transportation of excessive loads, and shall be required to repair such damage to the approval of the DSC.

The Contractor shall not use any vehicles, either on or off road with grossly excessive, exhaust or noise emissions. In any built up areas, noise mufflers shall be installed and maintained in good condition on all motorized equipment under the control of the Contractor.

Adequate traffic control measures shall be maintained by the Contractor throughout the duration of the Contract and such measures shall be subject to prior approval of the DSC.

5.3 Workforce and Camps

The Contractor should, whenever possible, locally recruit the majority of the workforce and shall provide appropriate training as necessary.

Minimum Facilities required:

Construction camps when required shall be provided with the following minimum facilities:

- A perimeter security fence at least 2m in height constructed from appropriate materials.
- In every site adequate and suitable facilities for washing clothes and utensils shall be provided and maintained for the use of contract labor employed therein. Separate and adequate bathing facilities shall be provided for the use of male and female workers. Such facilities shall be conveniently accessible and shall be kept in clean and hygienic conditions.
- Sanitary arrangements, latrines and urinals shall be provided in every camp sites on the following scale:
 - Where female workers are employed, there shall be at least one latrine for every 25 females or part thereof.
 - Where males are employed, there shall be at least one latrine for every 25 males or part thereof.
 - Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.
 - Where workers of both sexes are employed, each latrine or urinal must be lockable from inside, and outside of each block there must be a notice in the language understood by the majority of the workers "For Men" or "For Women" as the case may be.
 - The latrines and urinals shall be adequately lighted and shall be maintained in a clean sanitary condition at all times and
 - Water shall be provided in or near the latrines and urinals by storage in drums.
- A sick bay and first aid station. First aid box shall be provided at every construction campsite and under the charge of a responsible person who shall always be readily available during working hours of the work place. He shall be adequately trained in administering first aid-treatment. Formal arrangement shall be prescribed to make motor transport available to carry injured person or person suddenly taken ill to the nearest clinic or hospital.
- Areas for the storage of fuel or lubricants and for a maintenance workshop. Such an area shall be enclosed and have a compacted/impervious floor to prevent the escape of accidental spillage of fuel and or lubricants from the site. Surface water drainage from enclosed areas shall be discharged through purposely designed and constructed oil traps. Empty fuel or oil drums may not be stored on site.
- Low cost sanitation facilities to provide treatment for wastewater discharges from toilets, wash rooms and the like. The standard of treatment to be achieved at all times is biological oxygen demand (BOD5) less than 30 ppm, suspended solids less than 50 ppm or as required by environmental regulations in Indonesia.
- Storm water drainage system to discharge all surface run off from the camp site to a silt retention pond which shall be sized to provide a minimum of 15 minutes retention for

storm water flow from the whole site that will be generated by a 20 year return period rainfall having duration of at least 15 minutes. The run-off coefficient to be used in the calculation of the silt pond volume shall be 0.9. Silt ponds shall be maintained in an efficient condition for use throughout the construction period with trapped silt and soil particles being regularly removed and transported and placed in waste material disposal approved by the DSC.

- All discharge from the silt retention pond shall be channeled to discharge to natural water via a grassed swale at least 20 meters in length with suitable longitudinal gradient.
- Waste disposal facilities shall be provided:
 - Disposal of sanitary wastes and excreta shall be into septic tanks.
 - Kitchen wastes shall be disposed into soak pits. Wastewater from campsites will be discharged and disposed in a kitchen sump located at least 15 meters from any body of water. Sump capacity should be at least 1.3 times the maximum volume of wastewater discharged. The bottom of the pit should be filled with coarse gravel and the sides shored up with board, etc. to prevent erosion and collapse of the pit.
 - Solid wastes generated in the construction site shall be reused if recyclable or disposed off in land fill sites
 - All camp facilities shall be maintained in a safe clean and or appropriate condition throughout the construction period.
- Fire breaks are important, together with an effective fire prevention policy.

Activities in Construction Camp

The following precautions need to be taken in construction of camps:

- Measures to ensure that no leaching of oil and grease into water bodies or underground water takes place
- Wastewater should not be disposed into water bodies
- Regular collection of solid wastes should be undertaken and should be disposed off safely
- All consumables as the first aid equipment, cleaning equipment for maintaining hygiene and sanitation should be recouped immediately

The Contractor shall ensure that site offices, storages and workshops are located in appropriate areas as approved by the DSC and not within 200 meters of existing residential settlements. Explosive materials storage must be away from residential areas, administrative areas or other public areas, the location of the storage must be accepted, approved by relevant authority and comply with existing Indonesia regulations.

The Contractor shall ensure that site offices and particularly storage areas for diesel fuel and bitumen are not located within 50 meters of watercourses, and are operated so that no pollutants enter watercourses, either overland or through groundwater seepage, especially during periods of rain. This will require lubricants to be recycled and a ditch to be constructed around the area with an approved settling pond/oil trap at the outlet.

Site Restoration

At the completion of the construction work, all construction camp facilities shall be dismantled and removed from the site and the whole site restored to a similar condition to that prior to the commencement of the works or to a condition agreed to with the owner of the land. Various activities to be carried out for site restoration are:

- Oil and fuel contaminated soil shall be removed and transported and buried in waste disposal areas approved by the DSC.
- Construction campsite shall be grassed and trees cut replaced with similar tree species.
- Trees planted shall be handed over to the community or the land owner for further maintenance and watering
- Soak pits and septic tanks shall be covered and effectively sealed off.

5.4 Clearing the Right-of-Way

The Contractor shall ensure that vegetation clearing of right of way is carried properly.

- Before clearing, all valuable timber and vegetation should be selectively cleared. Whenever possible, communities should be allowed to benefit from this vegetation for firewood and other uses. Communities should be allowed to remove all usable bamboos from the right of way.
- Trees should be cut in such a way that they fall longitudinally and not transversally to the right of way alignment. Extra care should be taken to avoid tress from falling down slope with potential risk for communities or traffic below.
- Make use of any usable timber (after community uses) before construction starts.
- The Contractor shall remove and store the organic layer of the soil to be used for re-vegetation and restoration of affected sites.

5.5 Waste Management and Erosion

Solid, sanitation, and, hazardous wastes must be properly controlled, through the implementation of the following measures:

Waste Management:

- Minimize the production of waste that must be treated or eliminated.
- If hazardous wastes such as used oil, batteries, etc. are generated, proper procedures must be taken regarding their storage, collection, transportation and disposal.
- Identify and demarcate disposal areas clearly indicating the specific materials that can be deposited in each.
- Control placement of all construction waste (including earth cuts) to approved disposal sites (>200 m from rivers, streams, lakes, or wetlands and suit Indonesia standards, or the contractor shall implement the mitigation measures regulated in the Bidding document). Dispose in authorized areas all of garbage, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials.

Erosion Control:

- Disturb as little ground area as possible, stabilize that area as quickly as possible, control drainage through the area, and trap sediment onsite. Erect erosion control barriers around perimeter of cuts, disposal pits, and roadways
- Conserve topsoil with its leaf litter and organic matter, and reapply this material to local disturbed areas to promote the growth of local native vegetation.
- Apply local, native grass seed and mulch to barren erosive soil areas or closed construction surfaces.
- Apply erosion control measures before the rainy season begins preferably immediately following construction. Install erosion control measures as each construction site is completed.
- In all construction sites, install sediment control structures where needed to slow or redirect runoff and trap sediment until vegetation is established. Sediment control structures include windrows of logging slash, rock beams, sediment catchment basins, straw bales, brush fences, and silt
- Control water flow through construction sites or disturbed areas with ditches, beams, check structures, live grass barriers, and rock
- Maintain and reapply erosion control measures until vegetation is successfully established.
- Spray water on dirt roads, cuts, fill material and stockpiled soil to reduce wind-induced erosion, as needed

Maintenance:

- Identify and demarcate equipment maintenance areas (>15m from rivers, streams, lakes or wetlands). Fuel storage shall be located in proper areas and approved by the DSC.
- Ensure that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas; never dispose spent oils on the ground, in water courses, drainage canals or in sewer systems.
- All spills and collected petroleum products shall be disposed of in accordance with standard environmental procedures/guidelines. Fuel storage and refilling areas shall be located at least 50m from all cross drainage structures and important water bodies or as directed by the DSC.

5.6 Earthworks, Cut and Fill Slopes

All earthworks shall be properly controlled, especially during the rainy season.

The Contractor shall maintain stable cut and fill slopes at all times and cause the least possible disturbance to areas outside the prescribed limits of the works.

The Contractor shall complete cut and fill operations to final cross-sections at any one location as soon as possible and preferably in one continuous operation to avoid partially completed earthworks, especially during the rainy season.

In order to protect any cut or fill slopes from erosion, in accordance with the drawings, cut off drains and toe-drains shall be provided at the top and bottom of slopes and be planted with grass or other plant cover. Cut off drains should be provided above high cuts to minimize water runoff and slope erosion.

Any excavated cut or unsuitable material shall be disposed of in designated disposal areas as agreed to by the DSC and listed in the EMP. Any new disposal site proposed by the Contractor during construction will have to be approved by the DSC and DGH after presentation by the Contractor of a report which includes the justification for this new disposal site and the mitigation and restoration measures that will be implemented if the site is approved.

New disposal sites should not be located where they can cause future slides, interfere with agricultural land or any other properties, or cause soil from the dump to be washed into any watercourse. Drains may need to be dug within and around the tips, as directed by the Engineer

5.7 Stockpiles and Borrow Pits

Operation of a new borrowing area, on land, in a river, or in an existing area, shall be subject to prior approval of the DSC, and the operation shall cease if so instructed by the DSC. Borrow pits shall be prohibited where they might interfere with the natural or designed drainage patterns. River locations shall be prohibited if they might undermine or damage the river banks, or carry too much fine material downstream.

The Contractor shall ensure that all borrow pits used are left in a trim and tidy condition with stable side slopes, and are drained ensuring that no stagnant water bodies are created which could breed mosquitoes.

Rock or gravel taken from a river shall be far enough removed to limit the depth of material removed to one-tenth of the width of the river at any one location, and not to disrupt the river flow, or damage or undermine the river banks.

The location of crushing plants shall be subject to the approval of the Engineer, and not be close to environmentally sensitive areas or to existing residential settlements, and shall be operated with approved fitted dust control devices.

In any borrow pit and disposal site, the Contractor shall:

- Identify and demarcate locations for stockpiles and borrow pits, ensuring that they are 15 meters away from critical areas such as steep slopes, erosion-prone soils, and areas that drain directly into sensitive water bodies (except the sites designed with rock wall to cover the surroundings)
- Limit extraction of material to approved and demarcated borrow pits.
- Stockpile topsoil when first opening the borrow pit. After all usable borrow has been removed, the previously stockpiled topsoil should be spread back over the borrow area and graded to a smooth, uniform surface, sloped to drain. On steep slopes, benches or terraces may have to be specified to help control erosion.
- Excess overburden should be stabilized and re-vegetated. Where appropriate, organic debris and overburden should be spread over the disturbed site to promote re-vegetation. Natural re-vegetation is preferred to the extent practicable.
- Existing drainage channels in areas affected by the operation should be kept free of overburden.
- Once the job is completed, all construction -generated debris should be removed from the site.

The Contractor shall present a quarry or borrow pit exploitation plan. The operation of the quarry or borrow pit should follow the following practices: should include aspects like:

- Operations must be conducted in discrete stages with all valuable material fully extracted so that progressive rehabilitation can be carried out.
- It is most important that operators plan for progressive rehabilitation while operations are ongoing. Planning of final rehabilitation of a pit should occur well before the cessation of operations. Any plan for the rehabilitation of a site should include a brief description of the site prior to the commencement of operations, including: soils, landform, flora and fauna, drainage and conservation values.
- Deposits should be worked in a systematic manner, generally across or down the slope, so that worked out sections can be rehabilitated and left to revegetate without further disturbance.
- Where substantial volumes of waste rock or overburden will be produced by the operation of the quarry, this material should be placed in properly designed dumps, which are located and shaped to blend in with the surrounding landscape. Costly reshaping of dumps during the rehabilitation phase is then avoided.
- Minimization of the total disturbed area is the best method of reducing erosion caused by storm water run-off and weed invasion. Use boundary markers, such as stakes and flagging tape, to indicate to machinery operators the extent of areas to be cleared.
- The Contractor shall submit a blasting plan for each site for review and approval by the DGH and DSC prior to implementation.
- Avoid blasting in overcast and other adverse weather conditions. A regular blasting time should be adhered to and notified to communities.
- Quarrying should be carried out in a series of working benches if the material is stable. Orientation of benches should take into account the underlying geology and vantage points from which the quarry is visible. All benches should be self-draining. Each bench should act as a table drain, carrying water along the bench to a suitable discharge point or settling pond. If drainage is allowed to flow down the face from one bench to the next, erosion will occur and the benches may be lost.
- Topsoil is usually the darker, upper soil layers. Though only 10 - 30 cm deep, it contains nutrients, minerals, seed, and organic matter which helps bind it all

together. Wherever possible, stripped topsoil should be placed directly onto an area being rehabilitated. This avoids stockpiling and double handling of the soil.

- If topsoil must be stockpiled, remember that it does deteriorate in quality while stockpiled. The following practices will help maintain soil quality:
 - Topsoil should be kept separate from overburden, gravel and other materials; if possible, windrows of topsoil should not exceed one metre in height to reduce "souring";
 - topsoil stockpiles should be protected from erosion;
 - Growing vegetation on the stockpiles (shrubs or grasses) reduces erosion and will maintain biological activity in the soil;
 - Topsoil should not be buried or driven on, as this will damage soil structure.
 - Soil should be stored somewhere out of the way; and
 - Excessive handling of topsoil should be avoided.
- Sites should be regularly inspected for the presence of noxious weeds, their presence should be recorded, and if necessary a control program implemented.
- All run-offs from working areas, which contains sediment, should be collected in settling ponds before being discharged from the premises. Water from washing, screening, or dust reduction plants should be treated in a like manner. Accepted methods for removal of sediment from run-off include settling ponds, hay bale filters, aggregate filters, wetlands (shallow ponds planted with suitable swamp plants). For quarries in vegetated areas, run-off should be directed through vegetation prior to reaching any watercourse to enable further filtering of sediment.
- Management of noise impact can be achieved through:
 - Confining operations to reasonable operating hours is the simplest means of avoiding unreasonable noise impacts. Another effective means is to provide appropriate separation distance to enable the noise to decay to acceptable levels.
 - Enclosures may be required around crushing and screening plants. Solid barriers, such as bund walls and topographical features, provide the most effective 'in line' reduction of sound levels. Reliance on a barrier of vegetation alone will result in only marginal reduction in noise levels.
 - Hydraulic rock breakers produce less noise than secondary blasting with explosives. In general, operators should avoid using surface detonating cord for charge initiation. Sufficient stemming and appropriate delays between shot holes should always be used. Use of non-electric detonators has won widespread approval as the quietest delay system for initiating blasts.
- The following practices shall be considered to minimize environmental impact on air quality:
 - The direction of the prevailing winds and the placement of the stockpile on the site should be considered during the planning stage. Trees should be planted for windbreaks or topography and/or embankments utilized, to shield stockpiles and working areas from prevailing winds. As conveyors and transfer points can be major sources of dust, enclosures, mist sprays, or approved dust extraction equipment may be required. Drop distance between discharge point and top of the stockpile should be kept to a minimum.
 - The speed of vehicles is an important factor in the generation of dust. The speed of vehicles on site may need to be restricted. In addition, where transport routes are along unsealed roads, it may be advisable to slow down in the vicinity of residents along these routes.
 - Stockpiles and roads can be sprayed with chemicals such as magnesium chloride to produce an impermeable layer, which reduces dust development. Alternatively, regular spraying with water can also be used to suppress dust. Waste oil must not be used as a dust suppressant.
 - The nature of the material being transported and its potential to emit dust should be considered in the loading of trucks. Generally, the highest point of the load should not exceed the height of the tray walls, unless the load is covered. Environmental factors play a large role in the nature of air pollution and dust emissions. Extra care

should therefore be taken at times of high wind speed, or during other adverse weather conditions, to minimize dust emissions. Decreased vehicle speeds, increased watering of roads and stockpiles and reduction of the amount of product transported per load, may be appropriate in adverse weather conditions.

- Visual impact shall be minimized through:
 - Natural vegetation is a valuable resource that should be employed for screening purposes. Vegetation may needlessly be destroyed by brief activities with heavy machinery at the pit boundary. Clearing should be kept to the minimum absolutely necessary for efficient operations. Planting of vegetation will also provide additional screening.
 - Quarry faces should be screened from frequently used roads and commonly visited vantage points. Existing topographic features may be utilized as effective screens and any landscaping undertaken should be designed to be visually compatible with the surrounding natural landscape. Where practical, working faces should be oriented away from vantage points and neighbors and the direction of working should be carefully chosen so that that the working face is hidden from the most critical view. Where possible, uppermost benches should be worked out and rehabilitated as soon as possible.
 - New premises should not be opened adjacent to roads frequently used by the public, unless adequately screened by topography and/or vegetation. Access tracks should be aligned to avoid continuous line of sight from vantage points.
 - All exterior surfaces of buildings and fixed plants should be designed to blend in with the environment.

5.8 Disposal of Construction and Vehicle Waste

The Contractor shall establish and enforce daily site clean-up procedures, including maintenance of adequate disposal facilities for construction debris

Debris generated due to the dismantling of the existing structures shall be suitably reused, to the extent feasible, in the proposed construction (e.g. as fill materials for embankments). The disposal of remaining debris shall be carried out only at sites identified and approved by the DSC. The contractor should ensure that these sites (a) are not located within designated forest areas; (b) do not impact natural drainage courses; and (c) do not impact endangered/rare flora. Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas.

In the event any debris or silt from the sites is deposited on adjacent land, the Contractor shall immediately remove such, debris or silt and restore the affected area to its original state to the satisfaction of the DSC.

All arrangements for transportation during construction including provision, maintenance, dismantling and clearing debris, where necessary, will be considered incidental to the work and should be planned and implemented by the contractor as approved and directed by the DSC.

5.9 Safety during Construction

The Contractor's responsibilities include the protection of every person and nearby property from construction accidents. The Contractor shall be responsible for complying with all national and local safety requirements and any other measures necessary to avoid accidents, including the following:

- Carefully and clearly mark pedestrian-safe access routes;
- If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours;

- Maintain supply of supplies for traffic signs (including paint, sign material, etc.), road marking, and guard rails to maintain pedestrian safety during construction;
- Conduct safety training for construction workers prior to beginning work;
- Provide personal protective equipment and clothing (gloves, dust masks, boots, etc.) for construction workers and enforce their use;
- Post Material Safety Data Sheets for each chemical present on the worksite;
- Require that all workers read, or are read, all Material Safety Data Sheets. Clearly explain the risks to them and their partners, especially when pregnant or planning to start a family. Encourage workers to share the information with their physicians, when relevant;
- Ensure that the removal of asbestos-containing materials or other toxic substances be performed and disposed of by specially trained workers;
- During heavy rains or emergencies of any kind, suspend all work and mobilise resources for mitigation actions.
- Brace electrical and mechanical equipment to withstand seismic events during the construction.
- Setting up nets, fences or traps to prevent rocks, trees, and soil from falling down slope and put communities or traffic at risk. Specific high risk points are identified in the Information Sheet.

5.10 Environment Protection and Safety during Blasting

Due to the narrow characteristics of construction site and the presence of population along the right-of-way, mine exploding for road bed only inner exploding method will be allowed in order to limit soil and stone to be pushed away to fill up river/stream and effect to surrounding houses. The Contractor shall present for approval Blasting Plan for each site. The Plan should include the following methods to be applied to ensure safety and minimize environmental impacts:

- A blasting plan for each exploding point. The Plan must be available during construction period)
- Procedures for management on non-exploding mines or missing exploding points.
- All the safety precautions that will be applied during blasting such as:
Radius of dangerous area must be calculated based on site condition (for example: to small exploding the minimize radius of dangerous area is from 300m to 400m)
- If, practical conditions at the site does not allow the application of standard method to ensure safety for blasting the Contractor shall prepare and submit to the DSC and DGH a detail blasting plan for each of the blasting sites that satisfy: (i) create a barrier made of suitable materials to ensure safety, (b) temporary evacuate people and animals before blasting; and (c) blasting using inner exploding method.
- Exploding site must be far away from resident as required by regulations
- Exploding direction must be towards mountain sides or non residential areas and far from traffic road.
- Information systems such as signboards and setting warning surrounding exploding area to local people and traffic.
- Information campaigns to alert local government and communities about blasting schedules and safety measures.
- Provision for lead times (at least 15 min) before actual blasting with sirens that can be heard far away
- Evacuation people and cattle out of exploding area.
- Check safety of equipment and workers before returning to normal operations

5.11 Nuisance and Dust Control

To control nuisance and dust the Contractor should:

- Maintain all construction-related traffic at or below 15 mph on streets within 200 m of the site;
- Maintain all on-site vehicle speeds at or below 10 mph.
- To the extent possible, maintain noise levels associated with all machinery and equipment at or below 90 db.
- In sensitive areas (including residential neighborhoods, hospitals, rest homes, etc.) more strict measures may need to be implemented to prevent undesirable noise levels.
- Minimize production of dust and particulate materials at all times, to avoid impacts on surrounding families and businesses, and especially to vulnerable people (children, elders).
- Phase removal of vegetation to prevent large areas from becoming exposed to wind.
- Spray water at the site, and on dirt roads, cut areas and soil stockpiles or fill material as needed to ensure that dust level at areas close to housing, commercial areas, and recreational areas meets the existing Indonesia air quality standard.
- Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.
- Heating bitumen should be carried out at least 50 m from any residential area, the heating areas must be at the end of wind direction, be appropriately covered so as the impacts of smoke, dusts and odor onto the surrounding areas are minimized.

5.12 Demolition of Existing Infrastructure

The Contractor shall implement adequate measures during demolition of existing infrastructure to protect workers and public from falling debris and flying objects. Among these measures, the Contractor shall:

- Set aside a designated and restricted waste drop or discharge zones, and/or a chute for safe movement of wastes from upper to lower levels
- Conduct sawing, cutting, grinding, sanding, chipping or
- chiseling with proper guards and anchoring as applicable
- Maintain clear traffic ways to avoid driving of heavy equipment over loose scrap
- Use of temporary fall protection measures in scaffolds and out edges of elevated work surfaces, such as hand rails and toe boards to prevent materials from being dislodged
- Evacuate all work areas during blasting operations, and use blast mats or other means of deflection to minimize fly rock or ejection of demolition debris if work is conducted in proximity to people or structures
- Provide all workers with safety glasses with side shields, face shields, hard hats, and safety shoes

5.13 Community Relations

To enhance adequate community relations the Contractor shall:

- Inform the population about construction and work schedules, blasting schedules, interruption of services, traffic detour routes and provisional bus routes, and demolition, as appropriate.
- Limit construction activities at night. When necessary ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.
- Inform local community as early as possible and repeat at least one day in advance of any service interruption (including water, electricity, telephone, and bus routes) the

community must be advised through postings at the project site, at bus stops, and in affected homes/businesses.

- All community infrastructures such as roads, bridges, water supply systems, micro-power generators, boat landings, irrigation systems, etc. affected during construction must be restored to the satisfaction of the communities and approved by the DSC.
- All local roads used or by-passed by the Contractor will need to be rehabilitated to their original conditions.
- Establish and maintain a unit to receive, process and reach resolution on community complaints arising from construction activities. This mechanism will be overseen by the Contractor's SEO. Records of such complaints and their resolution must be kept and be available for review by the DSC and DGH .

5.14 Physical Cultural Resources Chance-finds Procedures

If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:

- (a) Halt the construction activities in the area of the chance find;
- (b) Delineate the discovered site or area;
- (c) Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the Provincial Department of Culture, or the local Institute of Archaeology if available to take over;
- (d) Notify the DSC who in turn will notify the Employer, responsible local authorities and the relevant Institute of Archaeology immediately (within 24 hours or less);
- (e) Responsible local authorities would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the local Institute of Archaeology. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- (f) Decisions on how to handle the finding shall be taken by the responsible authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- (g) Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
- (h) Construction work at the site could resume only after permission is given from the responsible local authorities and DGH concerning safeguard of the heritage.

The Contractor shall pay special care when crossing near cemeteries or affecting graves. The Contractor can only initiate construction in these areas after specific authorization from the DSC has been issued and graves have been relocated.

5.15 Hazardous Materials

If the construction site is expected to have or suspected of having hazardous materials (asbestos containing materials in debris from demolished buildings) the Contractor will be required to prepare a Hazardous Waste Management Plan to be approved by the DSC. The plan should be made available to all persons involved in operations and transport activities. Removal and disposal of existing hazardous wastes in project sites should only be performed by specially trained personnel following national or provincial requirements, or internationally recognized procedures

5.16 Health Services, HIV/AIDS Education

The Contractor shall provide basic first aid services to the workers as well as emergency facilities for emergencies for work related accidents including as medical equipment suitable for the personnel, type of operation, and the degree of treatment likely to be required prior to transportation to hospital.

The Contractor shall be responsible for implementing a program for the detection screening of sexually transmitted diseases, especially with regard to HIV/AIDS, amongst laborers is actually carried out.

The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.

The Contractor shall send, to the DSC, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Engineer may reasonably require.

The Contractor shall conduct an HIV-AIDS awareness program via an approved service provider, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

The Contractor shall throughout the contract (including the Defects Notification Period): (i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every six months, the first one should be within three weeks from construction commencement, addressed to all the Site staff and labor (including all the Contractor's employees, all Sub-Contractors and Consultants' employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities, concerning the risks, dangers and impact, and appropriate avoidance behavior with respect to Sexually Transmitted Diseases (STD)-or Sexually Transmitted Infections in general and HIV/AIDS in particular; (ii) provide male or female condoms for all Site staff and labor as appropriate; and (iii) provide for STI and HIV/AIDS screening, diagnosis, counseling and referral to a dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labor.

5.17 Environmental Emergency Procedures

Prior to construction commencement, the contractor shall submit to the DSC and DGH an Project Activity Safety Plan (PASP). PASP should cover an action plan in the event of adverse weather conditions or accidental leaks, spills or emissions. The Safety Plan shall be reviewed on regular basis and updated if necessary.

In the event that accidental leakage or spillage of diesel/chemicals/chemical wastes takes place, the following response procedures shall be followed immediately by the Contractor(s):

The person who has identified the leakage/spillage shall immediately check if anyone is injured and shall then inform the Contractor(s), DSC and DGH .

- The Contractor(s) shall ensure any injured persons are treated and assess what has spilled/leaked;
- Should the accidents / incidents generate serious environmental pollution (e.g. spillage / leakage of toxic or chemicals, large scale spillage / leakage, or spillage / leakage into the nearby water bodies which are used for irrigation / portable water), the SEO immediate inform DGH ;
- In such cases, the Contractor(s) shall take immediate action to stop the spillage / leakage and divert the spilled / leaked liquid to nearby non-sensitive areas;
- The Contractor(s) shall arrange maintenance staff with appropriate protective clothing to clean up the chemicals/chemical waste. This may be achieved through soaking with sawdust (if the quantity of spillage/leakage is small), or sand bags (if the quantity is large); and/or using a shovel to remove the topsoil (if the spillage/leakage occurs on bare ground); and
- Depending on the nature and extent of the chemical spill, evacuation of the activity site may be necessary.
- Spilled chemicals must not be flushed to local surface drainage systems. Instead, sawdust or sandbags used for clean-up and removed contaminated soil shall be disposed of by following the procedures for chemical waste handling and disposal already described.

The possibility exists for environmental emergencies of an unforeseen nature to occur during the course of the construction and operational phases of the project. By definition, the nature of such emergencies cannot be known. Therefore, the Contractor(s) shall respond on a case-by-case basis to such emergencies and shall initiate event-specific measures in terms of notifications and reactions.

The Contractor(s) shall prepare a report on the incident detailing the accident, clean-up actions taken, any pollution problems and suggested measures to prevent similar accidents from happening again in future. The incident report shall then be submitted to the DSC and DGH for review and keep in the records. The incident report shall also be submitted to the local Bappedalda, if required.

5.18 Environmental Training and Awareness

The Contractor should ensure that all concerned staff area ware of the relevant environmental requirements as stipulated in local environmental legislation and the Contract specifications. The Contractor(s) is responsible for providing appropriate training to all staff. This should be tailored to suit their level of responsibility for environmental matters. The Contractor(s) should also ensure that all site staff members are aware of the emergency response procedures. All staff should receive environmental induction training and managerial staff should receive additional training. The training materials should be reviewed by the SES and submitted to the DSC and DGH for approval.

Additional refresher training may be provided and this should be scheduled following periodic internal review of requirements for the Project activity concerned. Records should be maintained for staff environmental training and submitted to the DSC upon request. Records should be kept on site where possible for each project activity for easy access during site audits or enquiries. Environmental training records (e.g. attendance records for environmental awareness training, topics covered) should be kept.

5.19 Remedial Actions

Remedial actions which cannot be effectively carried out during construction should be carried out on completion of the works (and before issuance of the acceptance of completion of works:

- (a) All affected areas should be landscaped and any necessary remedial works should be undertaken without delay, including grassing and reforestation;
- (b) water courses should be cleared of debris and drains and culverts checked for clear flow paths; and
- (c) All sites should be cleaned of debris and all excess materials properly disposed;
- (d) Borrow pits should be restored.

FORM A4.5.1: Contractor’s Environmental Conditions Statement

(The contractor’s representatives shall read carefully the statements given below, fill in the relevant information in the blanks and sign. This form will form part of the contractor’s bid and construction contract signed with the successful Bidder)

I hereby acknowledge that I have read and fully understood the requirements of the Environmental Specifications set out in the Bidding document for the sub project in the WINRIP. I confirm that our bid price has included all of the costs needed to ensure proper implementation of the Project Environmental Management Plan and compliance to environmental specifications stated in the Biding document.

I acknowledge that, if construction contract is awarded to our organisation, I will appoint Mr/Mrs whose CV is attached to our bid to be the Workplace Safety and Environmental Officer (SEO) for the package(s) that we bid for. This person will work full time at the site and be responsible for carrying out all of the tasks assigned to him/her in accordance with the Environmental Specifications.

I also acknowledge that any non-compliance with these conditions may result in penalties being awarded against my company.

Signed: Date:
Name: Position in Company:

ANNEX 5: LARAP

ANNEX 6: SECTION 1.17: SPECIAL ENVIRONMENTAL CLAUSES

1.17.1 GENERAL

1.17.1.1

Description

- (a) This Section covers the provision of environmental countermeasures and actions that are needed to perform any civil works required under the Contract. In most cases the clauses have been extracted from other Sections of these Specifications and are included here to ensure awareness and compliance.
- (b) The Contractor shall take all reasonable steps to protect the environment (both on and off the Site, including base camp and other installations under the control of the Contractor) and to limit damage and disturbance to people and property resulting from pollution, noise and other results of his operations. The Contractor should also ensure that transportation and quarrying activities are undertaken in an environmentally acceptable manner.
- (c) As a means of minimizing environmental disturbance to all nearby communities all construction and transportation activities must be confined to the hours of operation as defined in Part 3 Conditions of Contract, Part A Contract Data, unless otherwise approved by the Engineer.
- (d) In order to ensure the effective implementation of all the Environmental Safeguards included in this section the Contractor shall complete columns 2 and 3 of the Environmental Management and Monitoring Plan (EMMP) prior to or at the Pre-Construction meeting. This EMMP is referred to in (e) below and included in Appendix 1.17. The EMMP shall cover all aspects of the Construction activities at the worksite and all other sites controlled by the Contractor.
- (e) In order to assist in ensuring the effective implementation of all the Environmental Safeguards referred to in this section the Engineer shall complete on a monthly basis columns 4,5,6 and 7 of the Environmental Management and Monitoring Plan identifying for each sub clause of Section 1.17 the adverse environmental activities or environmental omission, details of those activities and omissions, and activities carried out to rectify or remedy that omission. The recommended format of the Environmental Management and Monitoring Plan (EMMP) is attached as Appendix 1.17. On completion of columns 4, 5, 6 and 7 a copy shall be submitted to the Contractor for his immediate action where necessary.

1.17.1.2

Related Work Specified Elsewhere

- | | | |
|---|---|------------------|
| (a) General Conditions of Contract | : | relevant Clauses |
| (b) Mobilization | : | Section 1.2 |
| (c) Field Offices and Facilities | : | Section 1.3 |
| (d) Transportation and Handling | : | Section 1.5 |
| (e) Traffic Management and Safety | : | Section 1.8 |
| (f) Materials and Storage | : | Section 1.11 |
| (g) Cleaning | : | Section 1.16 |
| (h) Relocation of Existing Utilities and Services | : | Section 1.19 |

(i)	Ditches and Waterways	:	Section 2.1
(j)	Culverts and Concrete Drains	:	Section 2.3
(k)	Excavation	:	Section 3.1
(l)	Fill	:	Section 3.2
(m)	Pavement Widening	:	Section 4.1
(n)	Aggregate Base	:	Section 5.1
(o)	Unsealed Road Base	:	Section 5.2
(p)	Prime Coat and Tack Coat	:	Section 6.1
(q)	Hot Asphaltic Mixtures	:	Section 6.3
(r)	Reinstatement of Existing Shoulders on Sealed Roads	:	Section 8.2
(s)	Landscaping	:	Section 8.3
(t)	Road Furniture and Traffic Control Devices	:	Section 8.4
(u)	Reinstatement of Existing Bridge Structures	:	Section 8.5
(v)	Routine Maintenance of Pavement, Shoulder, Drainage, Road Furniture and Bridges	:	Section 10.1
(w)	Relevant Articles concerning the Environmental Aspects for each Section of these Specifications.		

1.17.2 ENVIRONMENTAL MANAGEMENT

1.17.2.1 Impacts on Water Resources

- (a) The Contractor shall ensure that polluting effluent from all of the Contractor's activities shall not exceed the values stated in the prescribed applicable Laws (*Refer specifically to Government Regulation (Peraturan Pemerintah) No.82 Year 2001 regarding Water Quality Management and Water Pollution Control*).
- (b) Natural streams or channels within or adjacent to the works of this Contract shall not be disturbed without the approval of the Engineer.
- (c) If any excavation or dredging in the stream bed that is unavoidable for the proper execution of the works, the Contractor shall, after the works are constructed, backfill all such excavations to the original ground surface or stream bed with material approved by the Engineer.
- (d) Material deposited within the stream area from foundation or other excavations, or from the placing of cofferdams, shall be removed completely following construction.
- (e) Waterways shall be relocated to ensure unrestricted flow past the works at all usual levels of flood, where embankment stabilization or other permanent works will unavoidably block, or partially block, any existing waterway.
- (f) All excavation shall be maintained free of water and the Contractor shall provide all necessary materials, equipment and labor for diverting waterways and the construction of temporary drains, cut off walls and cofferdams.
- (g) Excavation for borrow materials shall be prohibited or restricted where they might interfere with all drainage channels.

- (h) Any damaging liquid or solid contaminant, such as hydraulic or lubricating oils, dropped or spilled upon any portion of the site work and adjacent environment, base camp, or haul route shall be cleaned up immediately by the Contactor in order to avoid contamination of water and soil. The Engineer must approve the completion of the clean up.
- (i) Adequate means of trapping silt at the mixing plants shall be provided through temporary systems discharging into permanent drainage systems.
- (j) Washing of contractor's vehicles and equipment shall only be permitted in specially designated and equipped areas and shall not be permitted in any existing water courses.

1.17.2.2

Impacts on Air Quality

- (a) The Contractor shall ensure that emissions from all the Contractor's activities including transportation activities are kept to an absolute minimum through of modern equipment and through good management and maintenance, and any emissions shall not exceed the values stated in the applicable Laws (*Refer specifically to Government Regulation (Peraturan Pemerintah) No.41 Year 1999 regarding Air Pollution Control*).
- (b) The asphalt mixing plant, stone crusher and any other static construction equipment shall be installed in area as distant as possible from housing and other sensitive areas to ensure minimal disturbance and complaint from any member of the local community. The location shall be approved by the Engineer.
- (c) The asphalt mixing plant (AMP) shall be provided with a complete dust collector, i.e. dry cyclone and wet cyclone or filter tube system to ensure no air pollution in the atmosphere. If either of these systems is damaged or not functioning the equipment shall not be operated.
- (d) Trucks shall be sealed and all covers shall be securely fastened.
- (e) The Contractor shall maintain at the work site adequate supplies of water for moisture control during all placing and compacting operations, and shall also remove excess material from all existing roadways.

1.17.2.3

Impacts on the Noise Environment

The Contractor shall take all necessary precautions to minimize the amount of noise and vibrations coming from construction and transportation activities, by all vehicles and equipment, through the use of modern vehicles and equipment and through good management and maintenance. The contractor shall ensure that all noise and vibration levels from all the Contractors Activities are in accordance with the applicable Laws. (*Refer specifically to Decree of Minister of Environment No.48 Year 1996 regarding Noise Level Standard and Decree of Minister of Environment No 49 year 1996 regarding Level of Vibration.*)

1.17.2.4

Impacts on Traffic, Adjoining Properties, and Utilities

- (a) The provision given in Section 1.8, regarding Traffic Management and Safety, shall apply.
- (b) Trenching or other excavation across the roadway shall be carried out using half width construction so that the road is maintained open to traffic at all times.
- (c) The Contractor shall be responsible for all the consequences of traffic and shall prohibit such traffic when necessary by the provision of a detour or by half width construction.
- (d) All the works shall be carried out with the least inconvenience to traffic and at least one traffic lane must be kept open at all times.
- (e) At all times during the performance of the Works, the Contractor shall ensure that the pavement, shoulders and adjacent areas within the right-of-way shall be maintained free of construction material, debris or other such loose objects that may obstruct or endanger the free and safe passage of traffic. The Works shall also be maintained free of any unauthorized parking or street trading activity except in areas designated for such purposes.
- (f) The Contractor shall be responsible for obtaining any existing information on the existence and location of existing underground utilities and for obtaining and paying when required for any necessary permits or other authorization for their diversion or temporary cessation. (Ref: This work shall be carried out in accordance with Section 1.19)
- (g) The Contractor shall be responsible for the care and protection of any existing serviceable underground piping, cables, conduit, or other subsurface lines or structures that may be encountered and for repairing any damage caused to them by his operations.
- (h) All potholes in sealed pavements and holes in the finished Work made by density testing or otherwise shall be reinstated as soon as possible after damaged layers have been cut back, in order to avoid obstruction or hazards to traffic.
- (i) At all times during the time for completion the contractor shall maintain vehicular and pedestrian access to all houses, commercial, industrial and all other uses. Temporary accesses must provided where construction will close permanent access for any period of over 6 hours and all affected owners and community members must be notified at least 24 hours in advance of any impact on accesses.

1.17.2.5

Human Health and Safety

- (a) Provisions given in Particular Conditions sub clause 6.7 Health and Safety apply.
- (b) The Contractor shall: (i) comply with all applicable safety regulations (*Refer specifically to Law No. 1 Year 1970 regarding Work Safety and Law No. 12 Year 1999 regarding Fire Safety in work sites*); (ii) take care for the safety of all persons entitled to be on the Site; and (iii) provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of

the Works, for the use and protection of the public and of owners and occupiers of adjacent land.

- (c) The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel and shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents.
- (d) The Contractor shall at all times take necessary actions to protect the health and well being of the Contractor's Personnel employed on the Site by ensuring that all parts of the worksite are regularly kept clean and sanitary.
- (e) The provisions given in Article 3.1.1.5, regarding Safety of Excavation Works, shall apply.
- (f) All gears, pulleys, chains, sprockets, and other dangerous moving parts of Mixing Plants shall be thoroughly guarded and protected.
- (g) Adequate sanitary waste control facilities shall be provided for all project staff and workers and waste shall be collected regularly and disposed of in accordance with applicable laws. *(Refer specifically to Government Regulation (Peraturan Pemerintah) No. 82 Year 2001 regarding Quality Management and Water Pollution Control, and Law No. 1 Year 1970 regarding Work Safety).*

1.17.2.6

Impact on Flora and Fauna

- (a) The cutting of trees shall be carried out only when absolutely necessary for widening either the carriageway or the shoulders or for the clear zone and will be specifically defined and agreed by all parties during the field investigation. Every tree felled should be replaced by two semi mature trees of the same or similar species. No new tree planting should take place within the clear zone. Tree planting shall be in accordance with Section 8.3 Landscaping, of the Specifications and in accordance with pay item 8.3.3.
- (b) The Contractor shall limit the movement of his employees, the location of Base Camps, AMP etc and equipment within the sensitive environmental areas, such as the National Parks, Forest areas and all other officially protected sensitive areas so as to minimize damage to natural vegetation and shall endeavor to avoid any damage to land. No Base Camp, AMP, equipment or vehicle parking or storage area will be allowed outside the ROW where the road passes through an officially protected sensitive area.

1.17.2.7

Impacts on Soil

- (a) The Contractor shall ensure that pollutant discharge from the Contractor's activities shall not exceed the values stated in the prescribed applicable Laws *(Refer specifically to Government Regulation (Peraturan Pemerintah) No. 82 Year 2001 regarding Quality Management and Water Pollution Control).*

- (b) In order to avoid land sliding and erosion during excavation for borrow materials, the edge of a borrow pit shall be not closer than 2 metres from the toe of the embankment or 10 metres from the top of any cutting.

1.17.2.8 Disposal of Waste

- (a) The disposal of all solid and liquid waste from construction activities should only take place i) in accordance with Section 1.5 Transportation and Handling clause 1.5.3.4. as referred to below, and ii) in accordance with requirements and permissions of responsible institution at Province or Kabupaten/Kota.
- (b) When any material is to be disposed of outside the Site, the Contractor shall obtain a written permit from the property owner on whose property the disposal is to be made, which permit shall designate the disposal location and shall be submitted to the Engineer together with a request for approval to proceed.
- (c) When material is disposed of as provided above and the disposal location is visible from a highway, the Contractor shall dispose of the material in a neat and uniform manner to the satisfaction of the Engineer.

1.17.2.9 Impact on Cultural Heritage

The provisions given in GCC Sub Clause 4.24, regarding fossils, shall apply.

1.17.2.10 Other Matters

- (a) *For all quarries and other sources of material (whether owned or not owned by the Contractor) the contractor must submit to the Engineer details of the location of the material source in accordance with Section 1.11 Materials and Storage, Clause 1.11.1.3. The contractor must also submit to the Engineer a Haul Route Plan in accordance with Section 1.5 Transport and Handling, Clause 1.5.2.1 defining the routes on which the material will be hauled from the location of materials. The Engineer may require that the relevant local government institutions confirm that the source location and operation, and the haul route operation is undertaken in an Environmental and Socially acceptable manner in accordance with all local and national regulations.*
- (b) All Quarries used must be licensed and have full legal authorization from the Local government.
- (c) The extraction of any construction materials will not be allowed in any National Park or other officially protected sensitive area.

- (d) *The contractor must ensure that the Base Camp is operated in accordance with good environmental practice and that adverse environmental impacts are kept to an absolute minimum and in accordance with this section, and that the local community is not disturbed by any of the activities of the Base Camp.*
- (e) *In compliance with sustainable development practice, all timber materials for sheet piles, bearing piles, and mini timber piles, shall be purchased from a certified dealer (not from illegal logging). In Provinces where the Surat Keterangan Sahnya Hasil Hutan (SKSHH) (Letter indicating source from legal production forest) operates a certificate of its legal nature be attached to the purchase document for submission to the Engineer.*
- (f) All parts of the Site must be reinstated to its original condition prior to the commencement date of works.

1.17.3 IMPLEMENTATION OF REQUIRED ENVIRONMENTAL STUDIES

For any Subproject which has an UKL/UPL or AMDAL, in accordance with the Government of Indonesia's environmental laws, the Contractor must comply with any specific recommendations which will have been incorporated into the design and specifications. The full UKL/UPL or AMDAL document will be made available to the Contractor and Engineer for information.

1.17.4 MONTHLY REPORT

1.17.4.1 Submittal

Columns 4, 5, 6 and 7 of the monthly Environmental Management and Monitoring Plan (EMMP) is required to be submitted for each calendar month of the Time for Completion. A recommended format of the EMMP is included in Appendix 1.17 and will be available from the Sub-Directorate of Guidance and Standard Preparation.

The Engineer shall be responsible for preparation and submission of Columns 4, 5, 6 and 7 of each EMMP which shall conform to the following:

- (a) The EMMP shall be prepared in the recommended format.
- (b) The EMMP shall be supported by sufficient supporting documentation to make the submission complete and fully substantiated, in order that the Engineer may certify the application for payment within the time restraints of relevant Clauses of the General Conditions of Contract and these Specifications.
- (c) A copy of the EMMP together with its supporting documentation shall be submitted to the Contractor for his immediate action where necessary.

The Contractor shall be responsible for validating the accuracy of the Report.

1.17.4.2 Timing

Each Monthly Report of Environmental Monitoring and Management Report shall be dated on the last day of the calendar month collectively with the Monthly Statement as stipulated in Article 1.6.2.1.

1.17.5 BASIS FOR PAYMENT

No separate payment shall be made for environmental management operations executed in accordance with this Section of these Specifications except for Article 1.17.2.6.(a) where payments will be made. The cost of this work shall be included in the Unit Price of all other Pay Items included in the Contract, which prices shall be deemed full compensation for furnishing all materials, labour, equipment, tools and other incidental necessary for the environmental management.

If the Contractor fails in the performance of this work, the Engineer, without relieving the contractor of his responsibility, shall be entitled to carry out such work as he deems to be necessary and to charge the Contractor with the full cost of rectification thereof which sum shall be deducted from any money due or which may become due to the Contractor under the Contract. The Engineer will be responsible for defining the works necessary to rectify the issue and preparing a cost estimate.