



# Technical Assistance Consultant's Report

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Project Number: 44140  
Date: March 2015

## TA 7566-REG: Strengthening and Use of Country Safeguard Systems

### Subproject: Strengthening Capacity of Indonesia's AMDAL System (Indonesia)

#### FINAL REPORT

Prepared by ADB Consultant Team

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Asian Development Bank



# Technical Assistance Report

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## FINAL REPORT

Project Number: 44140-012

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### TA-7566 REG: Strengthening and Use of Country Safeguard Systems

**Prepared by the Technical Assistance Team**

**For Deputy for Environmental Spatial, Ministry of Environment and Forestry,  
Republic of Indonesia; BAPPENAS; and Asian Development Bank**

**Asian Development Bank**

# **EXECUTIVE SUMMARY**

## Executive Summary

The Environmental Impact Analysis (EIA) is an analysis toward significant impact of an activity plan designed for environment as required in decision making process for the implementation of the mentioned plan in Indonesia, which has established on 1982. In three (3) recent decades, this EIA system that known as *Analisis Mengenai Dampak Lingkungan* or AMDAL has been amended several times. The latest one is Government Regulation No. 27/2012 regarding Environmental Permit as derivation of Law No. 32/2009.

Despite that there are some substantial progress in the mentioned new regulation, i.e. streamlining in AMDAL process such as shorten AMDAL review that stated in the previous regulation, recover AMDAL rules as scientific analysis by consolidating roles and competency of technical team in AMDAL review, provide space for law enforcement for AMDAL-UKL-UPL violators, enforce access for community participation and transform mindset of all stakeholders, yet there are still several challenges that shall be rearranged in the future.

First challenge is some discrepancies that still occurred between Government of Indonesia and Donor regulatory frameworks, mainly in policy principle of ADB SPS 2009 with AMDAL regulatory framework of Government of Indonesia. Secondly, time punctuality in preparing AMDAL document by bearing in mind that each sector activities has difference characteristic and project cycle. Thirdly, low quality of AMDAL document as approved by AMDAL Review Commission that involve AMDAL implementers, mainly the compiler. Fourthly, number of independent expert that still lack and their uneven distribution at regional level in supporting performance of technical team to evaluate AMDAL document.

In responding the above mentioned challenges, ADB provide a Technical Assistance to Government of Indonesia for strengthening and utilizing country safeguard system with 5 (five) Outputs as following:

- Output-1: Recommendations for Strengthening of AMDAL Regulatory Framework and Administrative Procedures with International Safeguards Requirements;
- Output-2: Integration of AMDAL Implementation Procedures into Sector Specific Project Permitting Process and Development of Technical Guidelines;
- Output-3: Recommendations for Improvement to the Certification Procedures and of the Training of AMDAL Consultants;
- Output-4: Strengthened Technical Capacity for Review of AMDAL Reports;
- Output-5: Improved Knowledge-Management for National AMDAL Practitioners Networks

***Output 1: Recommendations for Strengthening of AMDAL Regulatory Framework and Administrative Procedures with International Safeguards Requirements***

- Result of the gap analysis for 11 policy principles of ADB SPS 2009 with AMDAL regulatory framework in Indonesia in general is concluded as follow:
    - The seven (7) policy principles of ADB SPS 2009 in relevant to AMDAL administration procedures for obtaining environmental permit, are 1).
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- Screening Process; 2). Environmental Assessment; 3). Alternative Examinations; 4). Environmental Management Plan; 5). Public Consultation and Participation; 6). Information Disclosure; and 7). Monitoring/Implementation of Environmental Management Plan (EMP);
- Remaining four (4) policy principles of ADB SPS 2009 in relevant to content of AMDAL document as main concern of the Donor covers: 8). Protection Area and Biodiversity Conservation; 9). Pollution Prevention; 10). Work Health & Safety; 11). Physical Cultural Resources.
- There are three (3) categories in equivalency analysis for policy principles that is equivalent, partly equivalent and inequivalent.
  - “Equivalent” means there is no gap since regulation or technical guideline is available and applied comprehensively. Policy principles with category “Equivalent” are Policy Principle 2<sup>nd</sup> : Environmental Assessment, Policy Principle 3<sup>rd</sup>: Alternatives Examinations, Policy Principle 5<sup>th</sup>: Public Consultation and Participation, mainly sub public consultation, Policy Principle 6<sup>th</sup>: Information Disclosure and Policy Principle 7<sup>th</sup>: Monitoring/Implementation of EMP. There is no recommendation for policy principles covered in this category.
  - “Partly equivalent” means there is some gap even the regulation or technical guideline is available but not applied comprehensively yet since the regulation or technical guideline has been distributed in other regulations. Policy principles with category “Partly Equivalent” are Principle 1<sup>st</sup>: Screening Process, mainly for determining activity that categorized obliged to have AMDAL, Policy Principle 4<sup>th</sup>: Environmental Management Plan, Policy Principle 5<sup>th</sup>: Public Consultation and Participation with sub complaint management, Policy Principle 9<sup>th</sup>: Pollution Prevention, Policy Principle 10<sup>th</sup>: Health and Safety and Policy Principle 11<sup>st</sup>: Physical Cultural Resources.
  - Recommendations for policy principles with category “partly equivalent” are consider social risks upon project affected people for involuntarily resettlement for Policy Principle 1<sup>st</sup>; impose capacity development training plan, cost estimation, feedback, and project adjustment for Policy Principle 4<sup>th</sup>; insert procedure of claim/complaint management in RKL-RPL document for Policy Principle 5<sup>th</sup> with sub claim management;prepare technical guideline for energy saving and include it in RKL-RPL for Policy Principle 9<sup>th</sup>; necessity for international standards of Work Safety and Healthy if unavailable yet in Indonesia and analysis on sources of health problems externally or from workers, including Sexually Transmitted Infections (STI) and Human Immunodeficiency Virus (HIV) for Policy Principle 10<sup>th</sup>; include “unexpected findings” in hypothetical significant impact to be analyzed in-depth for Policy Principle 11<sup>st</sup>.
  - “Inequivalent” means there is gap since no governing regulation or technical guideline available. Policy principle with category “Inequivalent” is Policy Principle 8<sup>th</sup>: Protection Area and Biodiversity Conservation with sub biodiversity.
  - Recommendation for this policy principle with category “inequivalent” is prepare technical guideline for biodiversity analysis.
  - As follow-up upon this Technical Assistance, mainly in harmonizing the discrepancies between requirements of donor and AMDAL regulatory framework in Indonesia, it shall be analyzed in details the implementation

level of ADB SPS 2009 in particular policy principles with category “partly equivalent” and “inequivalent”.

***Output 2: Integration of AMDAL Implementation Procedures into Sector Specific Project Permitting Process and Development of Technical Guidelines***

Based on the regulatory, it is stated that AMDAL compilation is performed at the planning stage of an activity. Often the information of the planning has not optimally elaborated in AMDAL since it is too early to be conducted. Contrarily if it is prepared at detailed design stage (end of planning stage), the concern is that the environmental permit has not been issued yet the construction is ongoing. Therefore, it requires well acknowledgement on cycle of each sector as well as its permit fulfillment in order the AMDAL compilation process and issuance of environmental permit follow the existing rules.

There are three (3) sectors in this TA that selected under several considerations. Firstly, geothermal sector that related to concession rights release for geothermal working area or permit that carried out in the beginning prior to implementation of some activities such as exploration, exploitation, utilization and normalization of geothermal working area; secondly, toll road sector with consideration of land acquisition activity and funding system of private public partnership (PPP); thirdly, river normalization with consideration of budget planning schedule for construction and land acquisition.

Generally in the prepared technical guideline, it has been carried out integrations such as sector project cycle, AMDAL permitting process, and land use permitting process.

Basic of law related to environmental permit process is Law No. 32/2009 regarding Protection and Management of Environment, GR No.27/2012 regarding Environmental Permit; MOER No. 5/2012 regarding Kind of Business and/or Activity that obliged to have AMDAL.

Basic of law related to land use is Law No. 2/2012 regarding Land Procurement for Public Interests and Regulation of Ministry of Forestry No. 16/2014 regarding Guideline for Forest Land Rent.

Analysis and recommendation results toward those three (3) selected sectors are elaborated as follow.

***Geothermal Sector***

- a. Basic of law related to this sector is Law No. 21/2014 regarding Geothermal; Government Regulation (GR) No. 59/2007 regarding Geothermal Activity;
  - b. Result of integration of those law aspects mentioned above recommends that AMDAL study preparation is better implemented after the exploration stage has finished and does not necessary to wait for the completion of feasibility study. This matter has also being considered in the process of AMDAL preparation that involve several parties, such as discussion within AMDAL Review Commission (ARC) and Technical Team of ARC, which takes two (2) years until the issuance of Environmental Permit.
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- c. For UKL-UPL document, in obtaining the environmental permit for exploration activity is better carried out after the issuance of Geothermal Permit.
  - d. Although the project cycle has been integrated into process of environmental permit and land use, it is still need to be developed toward another permit and regulation according to geothermal activity

### ***Toll Road Construction Sector***

- a. Basic of law related to this sector is Government Regulation No. 15/2005 regarding Toll Road, Government Regulation No. 43/2013 regarding Second Amendment to Government Regulation No. 15/2005 regarding Toll Road;
- b. Basic of law related to funding system is Regulation of Ministry of National Development Planning/Chief of National Development Planning Agency No. 3/2012;
- c. Phases of toll road development cover general planning, pre-feasibility study, feasibility study, engineering design, pre-construction (land acquisition), construction, and post-construction (operation and maintenance).
- d. There are two (2) project proposals in the Private Public Partnership scheme, such as solicited proposal and unsolicited proposal. Solicited proposal consists of four (4) phases, such as Phase 1 (planning of cooperation project) that consists of identification and selection; Phase 2 (preparation of cooperation project) that consists of pre-feasibility study and study of preparedness of cooperation project; Phase 3 (transaction of cooperation project) that consists of completion of pre-feasibility study, planning for business procurement, implementation of business procurement, and preparation of agreement; Phase 4 (management on agreement implementation) that consists of management and implementation of the mentioned agreement. While for the unsolicited proposal, there are two (2) phases, such as phase of agreement by business entity that consists of three (3) steps and phase of procurement that consists of eight (8) steps.
- e. Result of integration of those four (4) law aspects mentioned above recommends that AMDAL compilation shall be initiated from planning stage after the selection of cooperation project. Issuance of environmental feasibility agreement and environmental permit is requirement for tender process of procurement by business entities and as required for obtaining Forest Land Rent Permit for toll construction that passing through the forest area.
- f. Although the project cycle has been integrated into the funding system, process of environmental system and land use, it still needs to be developed integration into other regulations related to toll road development

### ***River Normalization Sector***

- a. River normalization is generally divided into three (3) stages, such as Preparation Stage, Construction Stage and Post-Construction Stage.

The preparation stage covers general planning, pre-feasibility study, and engineering design. Construction stage covers pre-construction (land acquisition activity), construction and post-construction. Post-construction covers post project evaluation.

- b. Result of integration of sector implementation and both law aspects mentioned above recommends that environmental documents (AMDAL or UKL-UPL) compilation shall be carried out within the feasibility study preparation.
- c. However, if the feasibility study and engineering design are available in General Planning, budgeting for environmental document compilation shall be formulated at least one (1) year prior to the implementation of work tender process and construction. It is recommended that budgeting for river normalization is by multiple-years budgeting for avoiding too close time of AMDAL document compilation with the construction stage.

***Output 3: Recommendations for Improvement to the Certification Procedures and of the Training of AMDAL Consultants***

Even though there are a lot of AMDAL documents that confirmed environmentally feasible by AMDAL Review Commission (ARC) yet based on findings by evaluation team of Ministry of Environmental and Forestry (MOEF) there are still many documents with low quality. It was related to lack capability of AMDAL compiler, both as individual or company, in compiling the AMDAL document.

Two (2) stages as foothold for evaluation toward AMDAL compiler are stage before obtaining competency certification and stage after obtaining the certification.

Stage before obtaining the certificate involves two (2) institutions, i.e. AMDAL Training Institution (*Lembaga Pelatihan Kompetensi Penyusun Dokumen AMDAL/LPKA*) and Competency Certification Institution (*Lembaga Sertifikat Kompetensi/LSK*). Regulation that arrange the certification system is MOER No. 07/2010 regarding Competency Certification for AMDAL Compiler and Requirements for AMDAL Training Institution. During the implementation of this Technical Assistance, it has been preparing the amendment on MoER No. 07/2010. Role of LPKA is to provide candidates of AMDAL compiler by using curriculum that has been confirmed by MoEFOR as stated in Decree of Chief for Environmental Education and Training Center Kepala (*Pusdiklat LH*) No. Kep-11/Pusdiklat/LH/2012. Further, the candidates for AMDAL compiler shall graduate as confirmed by LPKA before take the competency test run by LSK. The selection of LSK by KLHK is carried out by tender process and presently the implementing LSK AMDAL is INTAKINDO (*Ikatan Nasional Tenaga Ahli Konsultan Indonesia/Association of National Consultant Expert*). Nowadays, number of AMDAL certified compilers are eight hundred and twenty seven (827) persons that consists of four hundred and sixty eight (468) as member and three hundred and fifty nine (359) as team leader, as data per June 5, 2014. While data of accredited LPKA is amounting to fifteen (15) institutions that most of them attached to the Universities.

Stage after obtaining the certificate involves Competency Certification Institution (LSK). Monitoring and penalty award are awarded by LSK toward AMDAL compiler during the validity period of competency certificate, i.e. three (3) years.

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The following issues are some constraints in certification process:

- There is a gap between AMDAL curriculum and subject of analysis in competency test certificate, such as impact of an activity/project toward environmental components;
- Less partial coordination and cooperation among Ministry of Environmental and Forestry, Competency Certification Institution (LSK) and AMDAL Training Institution;
- Integrity violation by AMDAL implementers (proponent, compiler of AMDAL), such as certificate abuse;
- Unconfirmed expertise area;
- Unconfirmed sector registration by AMDAL Consultant Firm (LPJP).

The measures taken for aim of improvement are as following :

- Add subject of environmental impact into AMDAL training curriculum by the development of existing curriculum;
- Perform joint meeting periodically between Ministry of Environmental and Forestry, Competency Certification Institution (LSK) and AMDAL Training Institution (LPKA) for deciding when is the proper time to carry out routine meeting and discussion;
- Discuss and coordinate with the stakeholders for establishing ethic commission in which the Commission is covered inside, the role of Commission, etc.;
- Implement law enforcement against integrity violation;
- Review and analyze the implementation (determination) of expertise area in the requirements of competence certification;
- Review and analyze the registration carried out by AMDAL Consultant Firm according to sectorial activities.

The following are some recommendations related to the matters above :

- Prepare the development of AMDAL training curriculum;
- Manage and confirm yearly joint meeting;
- Establish the ethic commission;
- Plan the formulation of claim/complaint mechanism;
- Plan the implementation (:determination) of expertise area for certified AMDAL consultant and publish regulation regarding the requirements for expertise area;
- Plan the registration carried out by AMDAL Consultant Firm (LPJP) based on the sectorial activities and publish regulation regarding the requirements for registration by this Institution based in sectors.

#### ***Output 4 : Strengthened Technical Capacity for Review of AMDAL Reports***

The tasks and function of ARC is to grant recommendations regarding the environmental feasibility or non-feasibility of an activity to the Minister or local head (governor/regent/mayor) according to their authority by based on the results of AMDAL document (AMDAL, RKL & RPL) review or assesment. The

ARC consists of the Head, Secretary and Members. The ARC is assisted by a technical team in running their jobs. This Team consists of independent experts that doing technical studies. Its composition is a leader who acts as member of ARC secretariat as well and experts from technical institutions with relevant business and/or activity, experts from environmental institutions, and experts from related fields of business and/or activity with its plan and environmental impact.

The major challenges of ARC, among others, are as following :

- Insufficient acknowledgement of ARC secretariat members for AMDAL, especially staff in the local institutions;
- Administration process implementation and usage of guidance No. 4 of MOER No: 8/2013 for technical team that is not optimum yet;
- Frequent rotation of staffs in local government institution as members of ARC;
- Less independent of ARC role in decision making especially for government projects due to their status as civil servants which their decision is influenced by the head of local government;
- Less assertive of Chairman of AMDAL review meeting in limiting assessor inappropriate comments toward discussed AMDAL sector;
- Insufficient acknowledgement of representatives from SKPD as members of technical team toward their sectoral regulations;
- Less optimum of independent expert involvement in AMDAL assessment and decision making (including the review toward revision results) and its monitoring;
- Independent experts of ARC's Technical Team at regional level is found acted as AMDAL compiler as well (double tasks);
- Less concerning of the Secretariat of ARC for the invitation to the independent experts related to significant hypothetical impact for AMDAL in the review meeting;
- Insufficient presence of independent expert according to Significant Hypothetical Impact, mainly as Ad-Hoc members in AMDAL review meeting;
- Not all regional ARCs have experts with specific expertise that can evaluate impacts that occurred within an activity/business.

Several recommendations for coping the above mentioned major challenges are as following:

- Strengthen the team of ARC secretariat that required AMDAL technical proficiency;
  - Review and enhance the establishment and monitoring of ARC license. For instance, there shall be staff of Secretariat member who has AMDAL certificate as compiler and assessor;
  - Site visit of secretariat staff to ARC that completely applied MOER No. 8/2013 such as ARC of West Java Province, or perform independent guidance by correspondence or interview with Assistant of Deputy for Evaluation and Follow-up, Ministry of Environmental and Forestry;
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- Undertake recommendation of environmental feasibility without any interference from head of local government and if necessary, establish independent ARC;
  - Provide skills to chairman of AMDAL Review Meeting in leading the meeting for he may direct the members according to their expertise;
  - Confirm that the invitation for representative from Working Unit of Regional Apparatus (*Satuan Kerja Perangkat Daerah/SKPD*) shall meet the requirements of acknowledgement on regulations and policies of the sector they have represented;
  - Emphasize the ultimate presence of independent expert in the AMDAL review meeting and if necessary, postpone the meeting if there no independent expert due to DPH is available;
  - Develop collaboration between MOEF and Coordinating Agency for Environmental Study Center (*Badan Koordinasi Pusat Studi Lingkungan/BKPSL*) in establishing pool of expert to support the local ARCs in seeking the required experts with reliable competency, integrity and accountability, which required as member of the technical team. Function of BKPSL is as Expert Commission for 1). Screening the CV of candidated and confirm whether they have met all the significant requirements or not; 2). Put the prospective experts in data base of "Pool of Expert"; and 3). Keep update the database by checking whether the experts listed are still available or not in supporting the ARC.

***Output 5 : Improved Knowledge-Management for National AMDAL Practitioners Networks***

One of networks of practitioners that has been contributing for AMDAL effectiveness in Indonesia is *Forum AMDAL Indonesia/FAI*. This networks has been established at the end of 2009 under voluntarily operation. Membership of FAI highly varied, which consists of elements of government (central and regional), universities, consultant and project proponent. In supporting AMDAL effectivity, in fact FAI has no appropriate information system. For the Knowledge Management and information sharing with AMDAL stakeholders, it has been developed in this TA a website that will be independently organized by FAI. The objectives of website are to enhance the current forum of communication and allow sharing of guidelines, best practices, and samples of good existing AMDAL reports.

The built facilities in this website shall possibly being linked to provided information system that has existed in MOEF, i.e. DADU (*Dokumentasi AMDAL dan UKL-UPL*) and to the regional environmental institutions, even to the international environmental organizations such as AECEN (Asian Environmental Compliance and Enforcement Network), IAIA (International Association for Impact Assessment). As guideline on operating the website, it has been provided "BUKU PANDUAN PENGEMBANGAN WEB SITE" as attached in Appendix 5 in Compilation of Workshop Material and Guidelines.

Necessity to maintain the sustainability of website operation is the cost for operation and maintenance. It will cover salary for the administrator in enriching the material to be elaborated such as regulations, technical guideline, and best practices that useful for development in the future in order the materials may functioned due to aim of website establishment.

## Participants

### Consultant Team

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- ◆ Mesnan Silalahi (National Web-Based Information Technology Specialist)
- ◆ Suprayogi Murdianto (National AMDAL Stakeholder Consultation Specialist)

### Counterpart

- ◆ Deputy for Environmental Spatial, Ministry of Environment and Forestry
  - ◆ Deputy for Natural Resources and Environment, BAPPENAS
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# **ABBREVIATION**

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## Abbreviations

ADB	-	Asian Development Bank
AECEN	-	Asian Environmental Compliance and Enforcement Network
AERAP	-	Aquatic Ecosystem and Restoration Action Plan
AfDB	-	African Development Bank
AIP	-	<i>Asosiasi Institusi Pendidikan</i> (Association of Education Institute)
AIPKI	-	<i>Asosiasi Institusi Pendidikan Kedokteran Indonesia</i> (Indonesian Doctor Educational Institutions Associates)
AMAN	-	<i>Aliansi Masyarakat Adat Nusantara</i> (Indigenous People Alliance of the Archipelago)
AMDAL	-	<i>Analisis Mengenai Dampak Lingkungan</i> (Environmental Impact Assessment)
ANDAL	-	<i>Analisis Dampak Lingkungan</i> (Environmental Impact Analysis)
APBD	-	<i>Anggaran Pendapatan dan Belanja Daerah</i> (Regional Revenues and Expenditures Budget)
APBN	-	<i>Anggaran Pendapatan dan Belanja Nasional</i> (National Revenues and Expenditures Budget)
ARC	-	AMDAL Review Commission
ASSOCHAM	-	Assistant Chamber of Commerce and Industry of India
ASDEP	-	<i>Asisten Deputi</i> (Deputy Assistant)
ATPA	-	<i>Anggota Tim Penyusun AMDAL</i> (Member of AMDAL Team)
BAPEDAL	-	<i>Badan Pengendalian Dampak Lingkungan</i> (Environmental Impact Management Agency)
BAPPENAS	-	<i>Badan Perencanaan Pembangunan Nasional</i> (National Development Planning Agency)
BBWS Cilicis	-	<i>Balai Besar Wilayah Sungai Ciliwung Cisadane</i> (River Basin Organization of Ciliwung Cisadane)
BLHD	-	<i>Badan Lingkungan Hidup Daerah</i> (Local Environmental Agency)
BKPM	-	<i>Badan Koordinasi Penanaman Modal</i> (Investment Coordinating Board)
BKPSL	-	<i>Badan Koordinasi Pusat Studi Lingkungan</i> (Joint Agency for Environmental Study Center)
BPJT	-	<i>Badan Pengatur Jalan Tol</i> (Toll Road Authority)

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BUJT	-	<i>Badan Usaha Jalan Tol (Toll Road Entities)</i>
BPLHD	-	<i>Badan Pengelolaan Lingkungan Hidup Daerah (Local Environmental Management Agency)</i>
BPN	-	<i>Badan Pertanahan Nasional (National Land Agency)</i>
BPUKSP	-	<i>Badan Penyelenggara Ujian Sertifikasi Konsultan Pajak (Board of Executor Tax Consultant Certification Examination)</i>
CIAC	-	<i>Certified Individual of AMDAL Consultant</i>
CEP	-	<i>Continuous Evaluation Process</i>
CII	-	<i>Confederation for Indian Industry</i>
CPD	-	<i>Continuous Professional Development</i>
CQS	-	<i>Certified Quality System</i>
DADU	-	<i>Dokumentasi AMDAL dan UKL-UPL (EIA and Environmental Management &amp; Monitoring Effort Documentation)</i>
DANIDA	-	<i>Danish International Development Agency</i>
DCMF	-	<i>Design Construct Manage Finance</i>
DED	-	<i>Detailed Engineering Design</i>
DGWR	-	<i>Directorate General of Water Resources</i>
DMCs	-	<i>Developing Member Countries</i>
DOE	-	<i>Department of Environment</i>
DPH	-	<i>Dampak Penting Hipotetik (Hypothetical Significant Impact)</i>
EAC	-	<i>Expert Appraisal Committee</i>
EBRD	-	<i>European Bank for Reconstruction and Development</i>
EBTKE	-	<i>Energi Baru Terbarukan dan Konservasi Energi (Directorate General of Renewable Energy and Energy Conservation)</i>
EHSG	-	<i>Environmental, Health, and Safety Guideline</i>
EIA	-	<i>Environmental Impact Analysis</i>
EMME	-	<i>Environmental Management and Monitoring Efforts</i>
EMP	-	<i>Environmental Management Plan</i>
ESC	-	<i>Environmental Study Center</i>
ESDM	-	<i>Energy and Mineral Resources</i>
ESMF	-	<i>Environmental &amp; Social Management Framework</i>
ESMS	-	<i>Environmental and Social Management System</i>
FAE	-	<i>Functional Area Expert</i>
FAI	-	<i>Forum AMDAL Indonesia (Indonesian AMDAL Forum)</i>

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FAQ	-	<i>Frequently Asked Questions</i>
FGD	-	<i>Focus Group Discussion</i>
FI	-	<i>Financial Intermediary</i>
FICCI	-	<i>Federation of Indian Chambers of Commerce and Industry</i>
FIL	-	<i>Financial Intermediary Lending</i>
FISIP	-	<i>Fakultas Ilmu Sosial dan Ilmu Politik (Social and Political Faculty)</i>
FBS	-	<i>Fixed Budget Selection</i>
GHG	-	<i>Green House Gas</i>
GIZ	-	<i>Deutsche Gesellschaft für Internationale Zusammenarbeit</i>
GOI	-	<i>Government of Indonesia</i>
GRM	-	<i>Grievance Redress Mechanism</i>
HAKLI	-	<i>Himpunan Ahli Kesehatan Lingkungan Indonesia (Indonesian Environmental Health Association)</i>
IAGI	-	<i>Ikatan Ahli Geologi Indonesia (Association of Indonesian Geologist)</i>
IDA	-	<i>International Development Association</i>
IEE	-	<i>Initial Environmental Examination</i>
IFC	-	<i>International Finance Corporation</i>
IKPI	-	<i>Ikatan Konsultan Pajak Indonesia (Indonesian Tax Consultant Association)</i>
INTAKINDO	-	<i>Ikatan Nasional Tenaga Ahli Konsultan Indonesia (National Association of Indonesian Consultant Expert)</i>
IPB	-	<i>Institut Pertanian Bogor (Bogor Agriculture Institute)</i>
IPP	-	<i>Indigenous People Plan</i>
IPPKH	-	<i>Ijin Pinjam Pakai Kawasan Hutan (Forestry Land Rent Permit)</i>
IPSA	-	<i>Initial Poverty and Social Analysis</i>
IRM	-	<i>Indonesia Resident Mission</i>
ITB	-	<i>Institut Teknologi Bandung (Bandung Technology Institute)</i>
IUP	-	<i>Ijin Usaha Pertambangan (Mining Business Permit)</i>
JICA	-	<i>Japan International Cooperation Agency</i>
KA	-	<i>Kerangka Acuan (Term of Reference/TOR)</i>
KB-UKDI	-	<i>Komisi Bersama Uji Kompetensi Dokter Indonesia (Joint Commission of Indonesian Doctor of Competency Test)</i>

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KDI	-	<i>Kolegium Dokter Indonesia (Indonesian Doctor Collegiums)</i>
KKI	-	<i>Konsil Kedokteran Indonesia (Indonesian Doctor of Medicine/Dental Council)</i>
KPA	-	<i>Kawasan Pelestarian Alam (Natural Conservation Area)</i>
KPH	-	<i>Kawasan Pengelolaan Hutan (Forestry Management Unit)</i>
KPKP	-	<i>Konsorsium Pengembangan Konsultan Pajak (Tax Consultant Development Conservation)</i>
KSA	-	<i>Kawasan Suaka Alam (Natural Sanctuary Area)</i>
KTPA	-	<i>Ketua Tim AMDAL (AMDAL Team Leader)</i>
LAMP	-	<i>Linux Apache My Structured Query Language and Hypertext Preprocessor</i>
LARP	-	<i>Land Acquisition and Resettlement Plan</i>
LB3	-	<i>Limbah Bahan Berbahaya dan Beracun (Hazardous and Toxic Waste)</i>
LCS	-	<i>Least – Cost Selection</i>
LDO	-	<i>Lease Develop Operate</i>
LFA	-	<i>Logical Framework Analysis</i>
LPJP	-	<i>Lembaga Penyedia Jasa Penyusun AMDAL (AMDAL Consultant Firm)</i>
LPKA	-	<i>Lembaga Pelatihan Kursus AMDAL (AMDAL Training Institution)</i>
LP2LPK	-	<i>Lembaga Pelatihan dan Pengkajian Lingkungan Perairan &amp; Perikanan (Training Agency and Environmental Study Center for Water and Fisheries)</i>
LSK	-	<i>Lembaga Sertifikasi Kompetensi AMDAL (The Institution for Certification of AMDAL Competency)</i>
MDB	-	<i>Multilateral Development Banks</i>
MIGAS	-	<i>Minyak dan Gas (Oil and Gas)</i>
MOAD	-	<i>Ministry of Agriculture Decree</i>
MOAR	-	<i>Ministry of Agriculture Regulation</i>
MOE	-	<i>Ministry of Environment</i>
MOEC	-	<i>Ministry of Education and Culture</i>
MOED	-	<i>Ministry of Environmental Decree</i>
MOEF	-	<i>Ministry of Economic and Finance</i>
MOEFOR	-	<i>Ministry of Environment and Forestry</i>
MOEMR	-	<i>Ministry of Energy and Mineral Resources</i>
MOER	-	<i>Ministry of Environmental Regulation</i>

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MOFD	-	<i>Ministry of Finance Decree</i>
MOFOR	-	<i>Ministry of Forestry</i>
MOHR	-	<i>Ministry of Health Regulation</i>
MOPW	-	<i>Ministry of Public Works</i>
MONEV	-	<i>Monitoring and Evaluation</i>
MP3EI	-	<i>Master Plan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia (Master Plan for the Acceleration and Expansion of Indonesian Economic Development)</i>
MTKI	-	<i>Majelis Tenaga Kesehatan Indonesia (Assembly of Indonesian Health Worker)</i>
MTKP	-	<i>Majelis Tenaga Kesehatan Propinsi (Assembly of Provincial Health Man Power)</i>
NABET	-	<i>National Accreditation Board for Education and Training</i>
NGO	-	<i>Non Government Organization</i>
NRBT	-	<i>National Re-gristration Board for Personnel &amp; Training</i>
OECD	-	<i>Organization for Economic Cooperation and Development</i>
OJT	-	<i>On the Job Training</i>
PAD	-	<i>Project Appraisal Document</i>
PAP	-	<i>Project Affected People</i>
PDKI	-	<i>Perhimpunan Dokter Keluarga Indonesia (Indonesian Family Doctor Association)</i>
PGE	-	<i>Pertamina Geothermal Energy</i>
PIPIB	-	<i>Peta Indikatif Penundaan Pemberian Izin Baru (Indicative Moratorium Map)</i>
PPL	-	<i>Pejabat Pengawas Lingkungan (Environmental Inspection Officer)</i>
PSP	-	<i>Penugasan Survei Pendahuluan (Preliminary Survey Assignment)</i>
PSL	-	<i>Pusat Studi Lingkungan (Environment Study Center)</i>
PPLH	-	<i>Pusat Penelitian Lingkungan Hidup (Environmental Research Center)</i>
PPLH (Izin)	-	<i>Izin Pengelolaan dan Perlindungan Lingkungan (Environmental Management and Protection (Permit))</i>
PPP	-	<i>Kerjasama Pemerintah Swasta (Public Private Partnership)</i>
PPSML UI	-	<i>Pusat Penelitian Sumberdaya Manusia dan Lingkungan Universitas Indonesia (Human Resource and Environmental Research Center of Indonesian University)</i>

Pusdiklat	-	<i>Pusat Pendidikan dan Latihan (Education and Training Center)</i>
QACU	-	<i>Quality Assurance and Compliance Unit</i>
QBS	-	<i>Quality Based Selection</i>
QCI	-	<i>Quality Council of India</i>
QCBS	-	<i>Quality Cost Based Selection</i>
RAP	-	<i>Resettlement Action Plans</i>
REA	-	<i>Rapid Environmental Assessment</i>
REDD	-	<i>Reduction of Emissions from Deforestation and Forest Degradation</i>
RFP	-	<i>Request For Proposal</i>
RKL/RPL	-	<i>Rencana Pengelolaan Lingkungan/Rencana Pemantauan Lingkungan (Environmental Management Plan/Environmental Monitoring Plan)</i>
RSA	-	<i>Regional Safeguards Advisor</i>
RSDD	-	<i>Regional Sustainable Development Department</i>
RSES	-	<i>Environmental and Safeguards Division</i>
RTRW	-	<i>Rencana Tata Ruang dan Wilayah (Spatial Planning)</i>
RPJM	-	<i>Rencana Pembangunan Jangka Menengah (Mid-Term Development Plan)</i>
SDA	-	<i>Sumber Daya Air (Water Resources)</i>
SDM	-	<i>Sumber Daya Manusia (Human Resources)</i>
SEA	-	<i>Strategic Environmental Assessment</i>
SEAC	-	<i>State Level Expert Appraisal Committee</i>
SEIAA	-	<i>State Level Environmental Impact Assessment</i>
SESA	-	<i>Strategic Environmental and Social Assessment</i>
SHWM	-	<i>Solid and Hazardous Waste Management</i>
SIA	-	<i>Social Impact Assessment</i>
SKKLH	-	<i>Surat Keputusan Kelayakan Lingkungan Hidup (Decision Statement of Environmental Feasibility)</i>
SLHI	-	<i>Status Lingkungan Hidup Indonesia (Indonesian Environmental Status)</i>
SOP	-	<i>Standard Operational Procedure</i>
SPPL	-	<i>Surat Pernyataan Pengelolaan Lingkungan (Statement of Environmental Management and Monitoring Ability)</i>
SPS	-	<i>Safeguard Policy Statement</i>
SSS	-	<i>Single Source Selection</i>
STP	-	<i>Sekolah Tinggi Perikanan (Fishery Higher Education)</i>

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STPI	-	<i>Sekolah Tinggi Perpajakan Indonesia (Indonesian Taxation High School)</i>
TLKJ	-	<i>Teknik Lingkungan dan Keselamatan Jalan (Environmental and Road Safety)</i>
UKL/UPL	-	<i>Upaya Pengelolaan Lingkungan/Upaya Pemantauan Lingkungan (Environmental Management and Monitoring Effort)</i>
USAID	-	<i>United States Agency for International Development</i>
WKP	-	<i>Wilayah Kerja Panas Bumi (Geothermal Working Area)</i>

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# **CHAPTER 1**

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# CHAPTER 1 INTRODUCTION

## 1.1 Background

1. The EIA system in Indonesia that known as *Analisis Mengenai Dampak Lingkungan* or AMDAL has established in 1982 and amended several times. The last amendment is Government Regulation No. 27/2012 regarding Environmental Permission as derivatation of Law No. 32/2009 regarding Environmental Protection and Management, which simplifies AMDAL procedures and provides stronger legal basis for enforcing AMDAL implementation. Following promulgation of the government regulation, MOEFOR plans to revise a series of ministerial decrees and technical guidelines.

2. However, several issues is still found along AMDAL process. For example, disharmonization between requirements of donor with Government of Indonesia (GOI) to compile AMDAL document for the donor still request other effort to complete AMDAL document; less integrated of AMDAL implementation procedure into project cycle and permitting process for some sectors; low quality of AMDAL document due of AMDAL document due to less capable AMDAL implementers such the compiler, certification system, etc.; lack ability of technical team at AMDAL Review Commision (ARC) at local level to assess AMDAL document and distribute experts that still centered at certain area.

3. ADB has engaged with GOI in improving environmental governance and management of environmental impacts through its loan and technical assistance projects and country environmental assessments. This support includes Country Environment Note for Indonesia (2010) and loan (Bappedal Regional Network Project, 1996) and technical assistance project (Capacity Building for Decentralization of the Environmental Impact Assessment Process, 2002) that addressed the issues of AMDAL regulations and capacity building in a decentralized framework.

4. Through this TA, ADB with GOI improve its effectiveness for harmonizing with international best practice and with project cycle in sectoral planning. Moreover, this TA will increase AMDAL implementers capability for AMDAL compilation and certification system as well. One of the AMDAL system determinant factors is strengthening of technical team of ARCs in the local level through expert recruitment as “pool of expert”.

## 1.2 General Objective

5. The objective of services is to assist Ministry of Environment for strengthening policy and institutional system for Environmental Impact Assessment (AMDAL) in Indonesia.

## 1.3 Main Objectives

6. There are several matters as main objectives of the service such as following: achieve the objectives by increasing harmonization of AMDAL regulatory framework and administrative procedures with international good

practice; integrate AMDAL implementation procedures into permitting of specific sector projects; improve certification procedures and training of AMDAL; strengthen technical capacity for AMDAL review, and; improve knowledge-management as well for national AMDAL practitioners network.

#### **1.4 Scope of Services**

7. Scope of services this Technical Assistance are:

- Identification of gaps between the AMDAL regulatory framework and administrative procedures with international good practices;
- Integration of AMDAL implementation procedure into planning and permitting processes in prioritized sectors;
- Strengthening of capacity for AMDAL consultants and improvement in Certification Procedure;
- Strengthening of capacity for the technical teams to review AMDAL reports;
- Strengthening of knowledge sharing and peer exchange among the AMDAL stakeholders.

8. This paper briefly outlines the Donor's Safeguard Policy requirements and reports in the identifying progress and consideration for mechanism of implementation improving for safeguard policy on the following issues and achieving the outputs of this TA as specified in Section 1.4.

- Gaps between AMDAL regulatory framework and administrative procedures with international good practices;
- Gaps on the sequence between the process of AMDAL and other permitting process particularly in prioritized sectors;
- Weakness of AMDAL consultant implementation and certification procedures;
- Lack ability of technical team for AMDAL Review Commissions/ARC to review AMDAL reports, and
- Low of sharing and peer exchange among the AMDAL stakeholders.

#### **1.5 Outputs of this TA**

9. The services take several actions on each issue through the activities that has been classified into five outputs as follow:

Output 1 : Recommendations for Strengthening of AMDAL Regulatory Framework and Administrative Framework as well as Administrative Procedures with International Safeguards Requirements

Output 2 : Integration of AMDAL Implementation Procedures into Sector Specific Project Permitting Process and Development of Technical Guidelines

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Output 3 : Recommendations for Improvement of the Certification Procedure and the Training of AMDAL Consultants

Output 4 : Strengthened Technical Capacity for Review of AMDAL (Environmental Impact Assessment) Reports

Output 5 : Improved Knowledge-Management for National AMDAL Practitioners Network

## 1.6 Stakeholders

10. In this service implementation, consultant has conducted survey to collect data and information from several stakeholders as listed in table below:

Table 1-1: Stakeholder by Output

Output	Stakeholder
<b>OUTPUT 1</b>	1. JICA
	2. The World Bank
	3. Bappenas
	4. PT. Perusahaan Listrik Negara (PLN)
	5. PT. Environmental Resources Management (ERM)
	6. PT. Lintas Marga Sedaya
<b>OUTPUT 2</b>	1. Directorate General of Renewable New Energy and Energy Conservation (EBTKE), Ministry of Energy and Mineral Resources
	2. Toll Road Authority (BPJT)
	3. Sub Directorate of Environmental and Road Safety, Technical Affairs Directorate, Directorate General of Highway, Ministry of Public Work
	4. Sub Directorate of Control and Utilization of Water Resources
	5. Sub Directorate of Technical Planning, Directorate General of Water Resource, Ministry of Public Work
	6. BBWS Cilicis
	7. PT. Pertamina Geothermal Energy (PGE)
	8. PT. Chevron
	9. PT. Star Energy
	10. Public Works Office of DKI Jakarta Province
	11. BPLHD of DKI Jakarta Province
	12. BPLHD of West Java Province
	13. BLHD of Banten Province

Output	Stakeholder
<b>OUTPUT 3</b>	1. LSK INTAKINDO
	2. PSLH
	3. PPSML of University of Indonesia (UI), Jakarta
	4. PPLH-LPPM of Bogor Agriculture Institute (IPB), Bogor
	5. PPSDALH of University of Padjajaran (UNPAD), Bandung
	6. PPLH of Surabaya Institute of Technology (ITS), Surabaya
	7. PPLH of University of Mulawarman (UNMUL), Samarinda
	8. PPLH of University of Hasanudin (UNHAS), Makassar
	9. PPLH of University of Diponegoro (UNDIP), Semarang
	10. Training Agency of Environment Academy (STTL), Yogyakarta
	11. LP2LPK of Fisheries Academy (STP), Jakarta
	12. PSLH of University of Andalas (UNAND), Padang
	13. PPLH of University of Lambung Mangkurat (UNLAM), Banjarmasin
	14. PPLH LPPM of University of Sebelas Maret (UNS), Surakarta
	15. PPLH of University of Riau (UNRI), Pekanbaru
	16. PPLH of University of Sriwijaya (UNSRI), Palembang
	17. PUSDIKLAT LH
	18. Certified AMDAL Consultant
	19. Certified AMDAL Company
<b>OUTPUT 4</b>	1. BLHD of South Tangerang City
	2. BLHD of Bogor Regency
	3. BPLHD of DKI Jakarta Province
	4. BLHD of Banten Province
	5. BPLHD of West Java Province
	6. HAKLI (Indonesian Environmental Health Association)
	7. IAGI (Association of Indonesian Geologist)
<b>OUTPUT 5</b>	1. Indonesian AMDAL Forum (FAI)
	2. Qipra

# **CHAPTER 2**

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## CHAPTER 2 INTEGRATED SAFEGUARD POLICIES & GAPS ANALYSIS (OUTPUT 1)

### 2.1 Introduction

11. The EIA system in Indonesia which is known as *Analisis Mengenai Dampak Lingkungan*, or AMDAL, was established in 1982 and it has been amended several times and the last amendment is Government Regulation No. 27/2012 regarding Environmental Permission is the derivative of the Laws No. 32/2009 regarding Environmental Protection and Management.

12. However the issue regarding the agreed AMDAL document in AMDAL assessment process has not entirely received by the donor. In some cases, AMDAL documents which had been already agreed upon by the authority (AMDAL Assessor Commission) still need deeper studies on issues like biodiversity, involuntary resettlement, indigenous people, etc.

13. Donors' policy on environment and social issues has been established, for example: Safeguards Policies Statement of ADB, 2009, World Bank Safeguard Policy and Environmental and Social Policy, 2009 and 2013 (revised), JICA Guidelines for Environmental and Social Considerations, April 2010, International Finance Corporation results 8 Performance Standard, 2012 need to consider.

14. The AMDAL policy in Indonesia is incorporated into the policy regarding involuntary resettlement and indigenous people. The policies and regulations which are used as references are: Law No. 32/2009 regarding Environmental Protection and Management; Government Regulation No. 27/2012 regarding Environmental Permitting; Minister of Environment Regulation (MOER) No. 5/2012 regarding Activities that Requires AMDAL; MOER No. 16/2012 regarding Guidelines for Preparing Environmental Documents; and MOER No. 8/2013 regarding Procedure of Evaluation and Checking for Environmental Documents and also Issuing of Environmental Permit. Other regulations that can be used as a reference in AMDAL policy frame are regulations derived from sectors of Forestry, Health, etc.

15. Through this TA, ADB and GOI (Government of Indonesia) will improve their effectiveness in harmonization of their efforts towards international best practice.

16. The objective is achieved through identification of the gap between AMDAL regulatory frameworks and administrative procedures with international good practice.

### 2.2. Methodology

17. Desk reviews as well as thorough examinations on relevant safeguard policy and several regulation were conducted. A comparative analysis or gap analysis on the requirements of Indonesian AMDAL and International Good Practices shall be taken. The gap analysis shall be taken both by regulatory frameworks and by practices.

18. The phase in gap analysis as mentioned figure below:

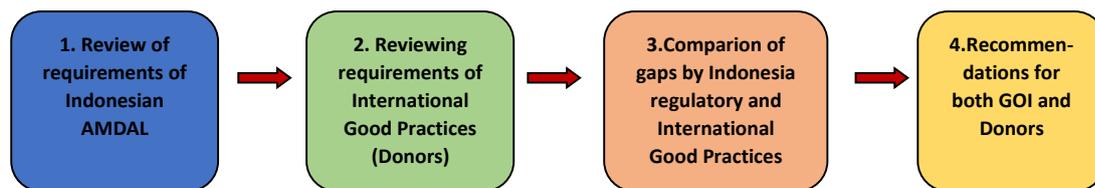


Figure 2-1: Phases in Gap Analysis

19. Phase 1 covers the review of Indonesian AMDAL requirements. The following are Indonesian regulations to AMDAL to be reviewed:

- a. Law No. 32/2009 regarding Environmental Protection and Management;
- b. Law No. 2/2012 regarding Land Acquisition for Development Activities in Public Interests;
- c. Law No. 13/2003 regarding Labor;
- d. Law No. 1/1970 regarding Safety;
- e. Government Regulation No. 27/2012 regarding Environmental Permit;
- f. President Regulation No. 71/2011 regarding Greenhouse Gases;
- g. MOER No. 5/2012 regarding Type Activities that Requires AMDAL;
- h. MOER No. 16/ 2012 regarding Guidelines for Preparing Environmental Documents;
- i. MOER No.17/2012 regarding Guidelines for Public Participation in AMDAL Process and Environmental Permit;
- j. MOER No. 8/2013 regarding Procedure of Evaluation and Checking for Environmental Documents and Also Issuing of Environmental Permit;
- k. Decree of Minister of Health No. 876/2001 regarding Technical Guidelines for Environmental Health Impact Analysis;
- l. Decree of Head of BAPEDAL No. 124/1997 on Guidelines for Public Health Aspect Review in Preparing AMDAL;
- m. Decree of Head of BAPEDAL No. 299/1996 on Technical Guidelines for Social Aspect in Preparing AMDAL;
- n. Decree of Head of BAPEDAL No. 56/1994 regarding Guidelines for Determination of Significant Impact.

20. Phase 2 covers the identification of the requirements for International Good Practices. Safeguard policies are assumed by the Donors/Lender as the key for protecting communities from the unintended harmful impacts of the projects. In many cases, violations of the safeguard policies, or weakness in the policies themselves, have caused the high profile controversy surrounding the projects and provided harmful impacts to the communities. Therefore, Donors/Lenders usually requires compliance to the safeguard policies, which mainly involve a structured process of impact assessment, planning and mitigation to address the adverse effects of projects throughout the entire project cycle and minimizing possible long term impacts.

21. The requirements of the Donors/Lenders as specified in their own safeguard policies shall be reviewed in this phase. The following International Good Practices/policies shall be reviewed:

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- Safeguard Policies Statement of ADB, June 2009;
  - World Bank Safeguard Policy and Environmental and Social Policy, 2009 and 2013 (revised);
  - JICA Guidelines for Environmental and Social Considerations, April 2010.

22. Phase 3 is conducted to analyze and compare, finding the gap between the requirements of Indonesian regulatory frameworks and Donors/Lender. Comparison on the categorization and information disclosures that are required by each Donor/Lender with the categorization of the project category stipulated by Indonesian regulations shall also be done.

23. Phase 4 contains the recommendations made upon the gaps of the AMDAL Indonesian regulatory framework and how to bridge these gaps.

### **2.3 Gap analysis on Donors' Safeguard Requirements and Indonesian Regulatory Frameworks**

24. In gap analysis, the discussion will be made on the comparison of the following topics between Indonesian and ADB Safeguards for Environmental and also others issue such as:

- a. ADB Environmental Safeguards Policy Principle 1 - Screening;
- b. ADB Environmental Safeguards Policy Principle 2 - Environmental Assessment;
- c. ADB Environmental Safeguards Policy Principle 3 - Examination of Alternatives;
- d. ADB Environmental Safeguards Policy Principle 4 - Environmental Management Plan;
- e. ADB Environmental Safeguards Policy Principle 5 - Consultation and Participation of Community;
- f. ADB Environmental Safeguards Policy Principle 6 - Information Disclosure;
- g. ADB Environmental Safeguards Policy Principle 7 - Monitoring and EMP implementation;
- h. ADB Environmental Safeguards Policy Principle 8 - Protection Area & Biodiversity Conservation;
- i. ADB Environmental Safeguards Policy Principle 9 - Pollution Prevention;
- j. ADB Environmental Safeguards Policy Principle 10 - Health and Safety;
- k. ADB Environmental Safeguards Policy Principle 11 - Physical Cultural Resources.

And other issues relevant the other donor requirements will be assessed, such as:

- l. Preparation of Environment Documents;
- m. Process of EIA Document Review and the Institutions;
- n. Determination of the Environmental Feasibility.

### 2.3.1. ADB Environmental Safeguards Policy Principle 1 - Screening

25. In the early stage of the project, Donors shall carry out screening and categorization of the project in order to identify the level of assessment and resources required for safeguard measures. The specific categorization and procedures are slightly different across different Donors, but they are all centered on the idea of protecting people and the environment from adverse impacts of project and ensuring sustainability. The following section discusses specific screening procedures for ADB, the World Bank and JICA.

#### Asian Development Bank

26. ADB screens the project in three areas: 1) environment; 2) involuntary resettlement; and 3) indigenous people. For environment, ADB applies following categorization based on the potential magnitude of project's impacts (*paragraph 50, Safeguard Policy Statement*).

- a. **Category A.** A proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An environmental impact assessment is required;
- b. **Category B.** A proposed project is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination is required;
- c. **Category C.** A proposed project is classified as category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed;
- d. **Category FI.** A proposed project is classified as category FI if it involves investment of ADB funds to or through a Funding Intermediate.

27. A full-scale environmental impact assessment (EIA) is required for category A projects. Meanwhile, an Initial Environmental Examination (IEE) or equivalent process is required for category B projects. In addition to EIA/IEE requirements, an initial poverty and social analysis (IPSA) is required for all projects, programs, and facilities (excluding technical assistance) to be financed by ADB<sup>1</sup>.

28. ADB requires that the magnitude of each environmental and social impact should be described quantitatively (qualitative statement) wherever possible, and should include the following particulars when applicable: impact type, extent (area of influence), duration (short, medium, long-term), irreversibility (reversible or permanent), performance against a recognized standard, and the value of the affected/lost resource. Each impact should be indicated against the applicable industry performance standard or guideline if this exists. Prediction of a large impact may not mean that it is significant, either because there are no sensitive receptors or the change is still within acceptable environmental limits. Likewise, a small size impact may be considered

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<sup>1</sup> An IPSA is required by ADB. 2010. Incorporation of Social Dimensions into ADB Operations. Operations Manual. C3/OP. Manila (6 December).

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significant if the change results in new conditions above acceptable levels. The size of the change needs to be compared against a standard or criterion.

29. The following location criteria for proposed projects that classify as Category A project<sup>2</sup>:

- in or near sensitive and valuable ecosystems (e.g., protected areas, wetlands, wild lands, coral reefs, and habitats of endangered species);
- in or near areas with cultural heritage sites (e.g. archaeological, historical sites or existing cultural sites);
- densely populated areas where resettlement may be required or pollution impacts and other disturbances may be significant;
- regions subject to heavy development activities or where there are conflicts in natural resource allocation;
- watercourses, aquifer recharge areas, or reservoir catchments used for potable water supply; and
- land or waters containing valuable resources (e.g. fisheries, minerals, medicinal plants, prime agricultural soils).

30. The examples of the potential environmental impacts suggesting a Category A classification:

- permanent conversion of potentially productive or valuable resources (e.g., fisheries, natural forests, wild lands);
- destruction of natural habitat and loss of biodiversity or environmental services provided by a natural system;
- risk to human health and safety (e.g. from generation, storage, or disposal of hazardous wastes, inappropriate occupational health and safety measures, violation of ambient water or air quality standards);
- displacement of large numbers of people or businesses; and
- absence of effective mitigation or compensation measures.

31. Samples of categorization of project type are provided in ADB Environmental Assessment Guidelines, 2003.

Table 2-1: Sample of Project Categorization by ADB Environmental Assessment Guidelines, 2003

Category A	Category B	Category C	Category FI
Dams and reservoirs	Agro-Industries	Forestry research and extension	Credit Lines
Forestry and production projects (large scale)	Rural electrification	Rural health services	Equity Investments
Industrial plants (large scale)	Electrical transmission	Marine research	
Irrigation, drainage, and flood control (large scale)	Urban water supply and sanitation	Family planning program	

<sup>2</sup> Environmental Assessment Guidelines, ADB, 2003

Category A	Category B	Category C	Category FI
Mineral development (oil and gas)	Rural water supply and sanitation	Microfinance projects likely to have minimal or no adverse impacts	
Port and harbor development	Irrigation and drainage (small scale)		
Thermal hydropower development and	Watershed project		
	Renewable energy		

Source: ADB Environmental Assessment Guidelines, 2003

32. For involuntary resettlement, the project's impacts are considered significant (Category A) if 200 or more persons will be physically displaced from home or lose 10% or more of their productive or income-generating assets<sup>3</sup>. A project with no involuntary resettlement is considered Category C and no further action is required. Projects that fall between them are considered Category B. The level of required assessment will be decided based on the extent and degree of the impacts.

33. Category A and B Projects usually involve land acquisition, which may result in adverse social impacts, including displacement of individuals and communities. Therefore, a Resettlement Plan should be prepared and briefly incorporated in the environmental assessment report, particularly in the environmental mitigation and monitoring plans to be implemented during project implementation and operation. The Resettlement Plan's implementation should also be monitored as part of regular project implementation. Significant resettlement requires a full Resettlement Plan by ADB means one or more of the following: (i) 200 people or more will experience resettlement effects; (ii) 100 people or more who will experience resettlement effects are indigenous or vulnerable people, including women-headed households, the poorest, isolated communities, those without legal title to assets, and pastoralists; or (iii) more than 50 people experiencing resettlement are particularly vulnerable, e.g., a group of hunter-gatherers.

34. Safeguard category for indigenous people is determined based on: i) the magnitude of impact; and ii) the level of vulnerability of the affected Indigenous Peoples community. The borrower/client is requested to carry out a full Social Impact Assessment (SIA) when screening by ADB confirms likely impacts on Indigenous Peoples, and if impacts on Indigenous Peoples are identified, the borrower/client will prepare an Indigenous Peoples Plan (IPP), including assessment of social impacts, in conjunction with the feasibility study.

35. Whether a specific group of people is considered as indigenous people or not is a sensitive issue in Indonesia. ADB uses the term "Indigenous people" in a generic sense to refer to a distinct, vulnerable, social and cultural group possessing the following characteristics in varying degrees, while taking into account the law and custom of host country and international conventions.

- (i) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;

<sup>3</sup>There is an interesting difference between ADB's requirement and WB/JICA requirement here. While '200 people' are used as a threshold to determine the significance of resettlement, WB/JICA policy has no reference to the magnitude of income loss.

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- (ii) collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories;
  - (iii) customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
  - (iv) a distinct language, often different from the official language of the country or region.

36. ADB's sector-based Rapid Environmental Assessment (REA) checklists are used to assist with screening and categorization. These checklists identify potential site sensitivity issues and the main potential impacts of each project type. At the minimum, basic information on project design and operation, the proposed project site/s, and general site features is required to complete categorization.

37. REA checklists have been developed for many sectors. REA checklists are subject to revision and new checklists are under development. The current available checklists are:

- a. Irrigation;
- b. Fisheries;
- c. Forestry;
- d. Hydropower;
- e. Thermal Power Plants;
- f. Power Transmission;
- g. Agro Industrial Projects;
- h. Chemical-based Industrial Projects;
- i. Petrochemical Industrial Projects;
- j. Urban Development;
- k. Water Supply;
- l. Solid Waste Management;
- m. Sewage Treatment;
- n. Airports;
- o. Ports and Harbour;
- p. Roads and Highways;
- q. Governance and Finance.

38. ADB categorization is made based on the most environmentally sensitive component. ADB's environmentally sensitive issues which require special attention during the environmental assessment process include the following: disturbance to tropical forests; conversion of wetlands; potential adverse effects on protected areas/sites; encroachment on lands or rights of indigenous peoples or other vulnerable minorities; involuntary resettlement; impacts on international waterways and other trans boundary issues; and toxic waste disposal.

### **World Bank**

39. Similar to ADB's approach, The World Bank carries out environmental screening of each proposed project to determine the appropriate extent and type of Environmental Assessment. The World Bank classifies the proposed project into one of four categories (A, B, C and FI, the same approach as ADB), depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts (*Para 8, OP 4.01*).

40. In its Environmental Assessment Sourcebook Update on Environmental Screening (1993), the World Bank elaborates several characteristics that should

be considered “significant” impact. They include direct pollutant discharges that are large enough to cause degradation of air, water or soil; large scale physical disturbance of the site and/or surroundings; extraction, consumption or conversion of substantial amounts of forest and other natural resources; measurable modification of hydrologic cycle; hazardous materials in more than incidental quantities; and involuntary displacement of people and other significant social disturbances. The project categorization based on World Bank Classification is shown below.

Table 2-2: Illustrative Lists of World Bank Project, Environmental Screening Update Sourcebook, 1993

Category A Projects	Category B Projects	Category C Projects
<ul style="list-style-type: none"> <li>• Aquaculture and mariculture (large-scale)</li> <li>• Dams and reservoir</li> <li>• Forestry production projects</li> <li>• Hazardous waste management and disposal</li> <li>• Industrial plants (large scale) and industrial estates, including major expansion, rehabilitation or modification</li> <li>• Irrigation, drainage and flood control (large-scale)</li> <li>• Land clearance and leveling</li> <li>• Manufacture, transportation and use of pesticides or other hazardous and/or toxic materials</li> <li>• Mineral development (including oil and gas)</li> <li>• New construction or major upgrading of highways or rural roads</li> <li>• Port and harbour development</li> <li>• Reclamation and new land development</li> <li>• Resettlement</li> <li>• River basin development</li> <li>• Thermal power and hydropower development or expansion</li> <li>• Water supply and wastewater collection, treatment and disposal projects (large-scale)</li> </ul>	<ul style="list-style-type: none"> <li>• Agro industries (small-scale)</li> <li>• Electrical transmission</li> <li>• Energy efficiency and energy conservation</li> <li>• Irrigation and drainage (small-scale)</li> <li>• Protected areas and biodiversity conservation</li> <li>• Rehabilitation or modification of existing industrial facilities (small-scale)</li> <li>• Renewable energy (other than hydroelectric dams)</li> <li>• Rural electrification</li> <li>• Rural water supply and sanitation</li> <li>• Tourism</li> <li>• Watershed projects (management or rehabilitation)</li> </ul>	<ul style="list-style-type: none"> <li>• Education</li> <li>• Family planning</li> <li>• Health</li> <li>• Institutional development</li> <li>• Most human resources projects</li> <li>• Nutrition</li> </ul>

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41. In addition, screening category also depends substantially on the project location or project setting. The following conditions shall consider the classification of a proposed project into Category A:

- In or near sensitive and valuable ecosystems, wetlands, wild lands, coral reefs and habitat of endangered species;
- In or near areas with archaeological and/or historical sites or existing cultural and social institutions;
- In densely populated areas, where resettlement may be required or potential pollution impacts and other disturbances may significantly affect communities;
- In regions subject to heavy development activities or where there are conflicts in natural resources allocation;
- Along watercourses, in aquifer recharge areas or in reservoir catchments used for potable water supply; and
- On lands or waters containing valuable resources (such as fisheries, minerals, medical plants, prime agricultural soils).

42. Environmental issues that are sensitive for World Bank is if the project may involve activities or environmental features that are always of particular concern to (but not limited to) disturbance of tropical forests, conservation of wetlands, potential adverse effects on protected areas or sites, encroachment on land lands or rights of indigenous peoples or other vulnerable minorities, involuntary resettlement, impacts on International waterways and other trans boundary issues and toxic waste disposal. In addition, if the proposed project shall provide the irreversible destruction or degradation of natural habitat and loss of biodiversity or environmental services provided by a natural system; risks of human health or safety (for example from generation, storage or disposal of hazardous wastes or violation of ambient air quality standards); and absence of effective migratory or compensatory measures shall be criteria for categorization of a proposed project into Category A.

## **JICA**

43. JICA adopts similar approaches in project screening and uses the same four categories (A, B, C and FI) when they screen the proposed project. In addition, JICA specifies several sensitive sectors, characteristics and areas that are likely to have significant impacts and thus typically considered as Category A (*Appendix 3, JICA Guidelines for Environmental and Social Considerations*).

44. The list of sensitive sectors is shown below. JICA acknowledges that large projects in these sectors are typically considered as Category A (although they do not provide the definition of “large”). However, it is important to note that this is an illustrative list only and therefore should not be used as an automated screening checklist. A project in a sector not included in Appendix 3 can still be classified as Category A if it is likely to have a significant adverse impact on the environment and society.

45. JICA’s list of sensitive sectors include the following:

- a. Mining, including oil and natural gas development;
- b. Oil and gas pipelines;

- c. Industrial development;
- d. Thermal power, including geothermal power;
- e. Hydropower, dams, and reservoirs;
- f. Power transmission and distribution lines involving large-scale involuntary resettlement, large-scale logging, or submarine electrical cables;
- g. River/erosion control;
- h. Roads, railways, and bridges;
- i. Airports;
- j. Ports and harbours;
- k. Water supply, sewage, and wastewater treatment that have sensitive characteristics or that are located in sensitive areas or in their vicinity;
- l. Waste management and disposal;
- m. Agriculture involving large-scale land clearing or irrigation.

46. In addition, JICA lists sensitive characteristics and areas. Projects that have such characteristics or implemented in such areas typically have significant environmental impacts. They are:

Sensitive Characteristics

- 1) Large-scale involuntary resettlement (200 people or more);
- 2) Large-scale groundwater pumping;
- 3) Large-scale land reclamation, land development, and land clearing;
- 4) Large-scale logging.

Sensitive Areas

Projects in the following areas or their vicinity:

- 1). National parks, nationally-designated protected areas (coastal areas, wetlands, areas for ethnic minorities or indigenous peoples and cultural heritage, etc. designated by national governments);
- 2). Areas that are thought to require careful consideration by the country or locality.

Natural Environment

- a. Primary forests or natural forests in tropical areas;
  - b. Habitats with important ecological value (coral reefs, mangrove wetlands, tidal flats, etc.);
  - c. Habitats of rare species that require protection under domestic legislation, international treaties, etc.;
  - d. Areas in danger of large-scale salt accumulation or soil erosion;
  - e. Areas with a remarkable tendency towards desertification.
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## Social Environment

- a. Areas with unique archaeological, historical, or cultural value;
- b. Areas inhabited by ethnic minorities, indigenous peoples, or nomadic peoples with traditional ways of life, and other areas with special social value.

47. JICA has Screening Format (*Appendix 4, JICA Guidelines*) to be filled out by the borrower and submitted to JICA. The format consists of a set of questions about the project scale and characteristics. While the screening decision is made by JICA, JICA uses the information when making screening decision.

## **Category FI**

48. In addition to Category A, B and C, there is another category, FI, in which donor funds are invested to or through financial intermediaries (FIs). When a project is classified as Category FI, ADB “conduct safeguard due diligence to assess the potential environmental and social impacts and risks associated with the FI’s existing and likely future portfolio (*paragraph 65, ADB Safeguard Policy Statement*).” In addition, ADB assesses FI’s commitment and capacity in social and environmental management, and if there are gaps in the FI’s capacity and ADB’s requirements, the ADB and FI will establish a time-bound plan to address identified gaps. All FI projects, except for ones without significant impacts (which will be treated as Category C project), are required to have or establish an appropriate environmental and social management system (ESMS<sup>4</sup>) that can properly manage potential risks associated with FI’s future portfolio. In general, FI is required to ensure that sub-projects funded by ADB meet ADB’s safeguard policy requirements. However, ADB may also set additional requirements for the FI’s activities depending on the FI’s portfolio and the safeguard systems of the host country.

49. In the case of the World Bank, eligibility of Financial Intermediary Lending (FIL) is defined in its OP8.30. Eligibility criteria include adequate profitability, capital, and portfolio quality; adequate managerial autonomy and commercially oriented governance; appropriate capacity, (including staffing) for carrying out subproject appraisal (including environmental assessment) and for supervising sub-project implementation. Again, it is important to note that the FI is required to show adequate safeguard capacity. The International Finance Corporation (IFC), the private arm of the World Bank, further divides category FI into FI-1, FI-2 and FI-3 based on potential significant adverse environmental or social risks (*paragraph 40, IFC Policy on Environmental and Social Sustainability*).

50. Application of safeguard policy for FI project can be a challenge. Safeguard procedures, such as the World Bank’s OP 4.01 and ADB’s Safeguard Policy Statement, are mainly designed for straight forward investment lending in which investments are identified and fully prepared by the time of Appraisal. In this case, safeguard documents such as EIA are prepared before the appraisal. However, FI and several other types of lending do not fit

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<sup>4</sup> The ESMS will incorporate the following elements: (i) environmental and social policies; (ii) screening, categorization, and review procedure; (iii) organizational structure and staffing including skills and competencies in environmental and social areas; (iv) training requirements; and (v) monitoring and reporting.

into these standard procedures. FI lending typically involve lending to sub-project. Another example is sector Investment lending, which normally involves the preparation and implementation of annual investment plans or sub-projects as time slice activities over the course of the project<sup>5</sup>. In these cases, the specific characteristics including potential environmental impact of sub-projects may not be known at the time of Board approval.

### **Decision-making mechanism in Screening Process**

51. In donor-funded projects, undertaking screening and making decisions in terms of safeguard categories are the responsibility of the donors. In the case of ADB, the operations department screens and categorizes each proposed project at the project identification stage based on project's potential environmental and social impacts. Projects categories are tentatively classified during the initial screening of anticipated impacts and risks, and this classification can be reconfirmed at the stage of management review meeting or staff review meeting. Quality assurance of projects and programs is undertaken by the project teams, with formal peer review of category "A" projects being done through ADB's environment committee. Internal and external environment networks facilitate knowledge sharing and dissemination of lessons.

52. In ADB projects, Rapid Environmental Assessment (REA) screening checklist shall be prepared to support the environmental classification of a project. REA uses sector-specific checklists which developed based on ADB past lesson learned and experiences. The checklists consist of questions those relate to: i) sensitivity and vulnerability of the environmental resources in the proposed project area; and ii) potential for the project to cause significant environmental adverse impacts. For a project that including numbers of different components, more than one REA checklist shall be prepared. The process of determining of a project's environment category is to be initiated by the Regional Department (RD) sector division, which will prepare a REA screening checklist, taking into account the type, size and location of the proposed project. The (RD) sector division director will submit the proposed environment category and the checklist to the Environment and Social Safeguard Division (RSES) director for concurrence or further discussion as required. Final categorization will be responsibility of Chief Compliance Officer (CCO).

53. For projects funded by the World Bank, a team leader prepares an "integrated safeguard data sheet" during the concept stage of project preparation. This will be evaluated and approved by regional safeguard coordinator and sector manager, resulting in a categorization of project.

54. It is important to highlight that classification is an ongoing process in donor-funded project. In other words, the classification can be changed at any time when more detailed information becomes available and/or the design of the proposed project is modified.

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<sup>5</sup> Other types of lending that deviate from normal procedures include Sector Adjustment lending and Emergency Recover projects.

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## Indonesia

55. Law No. 32/2009 Article 22 regulates the business/activity with significant impact toward environment that obliged to have AMDAL. Criteria for significant impact has defined according to following matters:

- Total of people affected by the proposed business/activity impact (PAP);
- Total of impact influence (extent) area;
- Intensity and duration of the impact occurrence;
- Total of other environmental components affected by the impact;
- Reversible or irreversible of the impact;
- Other criteria in accordance to the science and technology development; and/or
- International references applied by several countries as the policy framework on EIA.

56. Criteria for business/activity with significant impact toward environment that obliged to have AMDAL are as following: (a) changing the form of land and landscape; (b) exploitation of natural resources, both renewable and non-renewable; (c) processes and activities that could potentially cause pollution and/or environmental damage and waste and deterioration in the utilization of natural resources; (d) processes and activities which may affect the natural environment, artificial environment, as well as the social and cultural environment; (e) processes and activities which will affect the conservation area of natural resource and/or protection of cultural heritage; (f) introduction of species of plants, animals, and microorganisms; (g) the manufacture and use of biological and non-biological materials; (h) activities that have a high risk and/or affecting the national defense, and /or (i) application of the technology is expected to have great potential to affect the environment. There are three categories of activity based on Law No.32/2009, i.e.: AMDAL obligatory (article 22-33), UKL-UPL obligatory (article 34) and SPPL obligatory (article 35). Criteria for business/activity with significant impact toward environment that obliged to have AMDAL in details has been stipulated in MOER No.05/2012.

57. In the MOER No. 5/2012, that every business and/or activities that has impact on the environmental shall have Environmental Impact Assessment (AMDAL). Criteria for business and/or activities that must be completed with EIA:

- Shall have potential significant impact to the environment;
- Included as the type of business/activity as the prescribe positive list in Appendix 1 of MOER No. 5/2012 (sector and scale of the proposed business/activity plan);
- The proposed business/activity plan is located within the protected area or directly border with the conservation area (listed in Appendix 3 of MOER No. 5/2012);
- Excluded in the exception lists of Article 3, sub-article (4) such for activities of: a) mining, oil and gas and geothermal exploration; b) research and development in science field; c) those supported protected areas preservation; d) those related to the state defense and safety which shall not have significant impact to the environment; e) any cultivation which shall not have significant impact to the environment; and f) any cultivation

that allowed for native people with fixed total area and shall not reduce the protected function of the areas and under the strict supervision;

- If the proposed business/activity is not included in the prescribed list of Appendix 1 of MOER No. 5/2012 or the scale of the proposed business/activity plan is less than specified in the list, but based on screening the proposed business/activity shall have significant impact.
- If there is no specific technology to be applied in reducing or eliminating the significant negative impact affected by the proposed business/activity plan.

58. The screening of activities of AMDAL or UKL-UPL is as shown in the following figure:

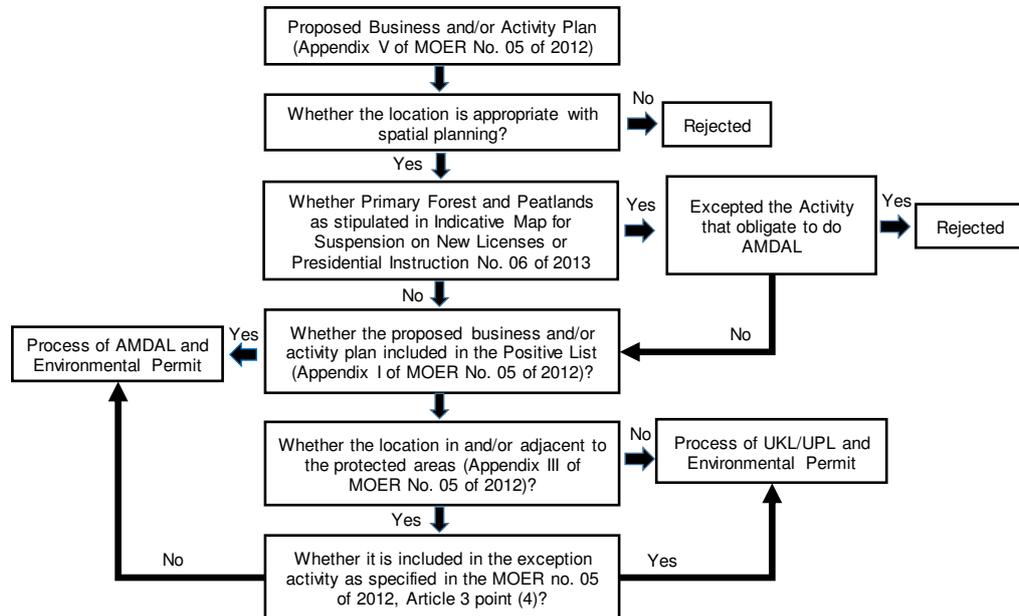


Figure 2-2: Screening of the Activities Related to AMDAL or UKL-UPL

59. The positive list of the Appendix I of MOER No. 5/2012 uses a single numerical threshold and does not specify the buffer zone for the scale and/or area of the proposed project. For example, the list specifies that a highway development project with minimum length of 5 km is obligated to have AMDAL, but AMDAL will not be required if the length is below 5 km. The use of the numeric threshold may pose challenges in capturing the real significance of the impact during screening stage as there is no scientific basis of concluding that environmental impact associated with a 4.9 km highway project is not significant while that of a 5 km highway project is significant.

60. In order to cover this weakness, Appendix IV of MOER No. 5/2012 provides the screening questions that allows for the regulatory body to refine the screening process based on potential environmental impacts for projects below the threshold. If the proposed project is below the threshold but may have potentially significant impact due to the location/context of the project as well as environmental carrying capacity, a written proposal shall be proposed to the Minister so that AMDAL will be carried out for the project. In reality, however, screening is basically undertaken based on the positive list as shown in

Appendix I, not in Appendix IV. Appendix IV is used for proposing UKL-UPL to AMDAL. The following is a checklist of questions intended for the screening process in Appendix IV of MOER No. 5/2012.

Table 2-3: Screening Questions of MOER No. 5/2012, Appendix IV

<b>Step 1: Location plan related questions:</b>	<b>Step 2: Activity/Project Characteristic questions:</b>	<b>Step 3: Determining Potential Impact:</b>	<b>Step 4:</b>	<b>Step 5:</b>
<p><b>Will the project....</b></p> <ol style="list-style-type: none"> <li>1. Change the existing land use?</li> <li>2. Change the abundance, quality and regeneration of natural resources at the project location?</li> <li>3. Change the absorption capacity of the natural environment, in particular the following: a) wetland area; b) coastal areas; c) forest and mountain areas; d) protected areas, and national park areas; e) protected areas regulated by regulation; f) areas with environmental quality exceeded the specified threshold; g) highly dense population area; and h) landscape that has important historical value, cultural or archaeological.</li> </ol>	<p><b>Will the project ....</b></p> <ol style="list-style-type: none"> <li>1. Change the landforms and landscape?</li> <li>2. Exploit the natural resources, either renewable or non-renewable?</li> <li>3. In its processes and activities cause the waste, pollution and environmental degradation and natural resource degradation in the utilization?</li> <li>4. In its processes and activities may affect to the natural environment, artificial environment as well as social and cultural environment?</li> <li>5. In its processes and activities may affect to the preservation of natural resources conservation and / or protection of cultural heritage</li> </ol>	<p>If answers of questions in Step 1 and 2 is "Yes", then continue to the following question:</p> <ol style="list-style-type: none"> <li>1. Total of PAP?</li> <li>2. Impact extent area?</li> <li>3. Impact intensity and duration?</li> <li>4. Total of other environmental components affected by the impact</li> <li>5. Impact cumulative characteristics; and</li> <li>6. Impact reversible or irreversible?</li> </ol>	<p>Review whether in the recent 10 years the results of environmental management and monitoring implementation of the proposed activities/project showing that:</p> <ol style="list-style-type: none"> <li>a. The proposed activity/project always cause similar adverse impact in nationwide;</li> <li>b. Availability of science and technology, procedures to manage the adverse impact either integrated or separated with the production processes.</li> </ol>	<p>If the impact characteristic cannot be recognized and the science and technology to mitigate the impact is not available, then the proposed activity/project is obligated to have AMDAL.</p>

Step 1: Location related questions:	Step 2: Activity/ Project Characteristic questions:	Step 3: Determining Potential Impact:	Step 4:	Step 5:
	6. Introduce the type of flora, fauna and micro-organisms 7. Use biological or non-biological materials? 8. Apply technology that highly potential to affect the environment? 9. Have high risks and/or affect to the state defense?			

61. Concerning land acquisition and involuntary resettlement, detailed guidelines on the criteria to judge significance of impact are regulated by Decree of Head of Bapedal No. 56/1994 and Law No. 2/2012. A proposed activity is categorized as significant if the total of PAPs who are not benefitted by the proposed business/activity/project is at least equal or more than the ones who are benefitted from the proposed activity/project.

62. However, Indonesian regulatory framework is only based on a positive list and that areas adjacent to the protected area to choose a project must be with AMDAL, and do not stipulate the specific requirements of the above significant impact criteria such as the criteria of ADB that mentioned if the 200 or more persons will be physically displaced from home or lose 10% or more of their productive or income-generating assets, then it is categorized as category A project and a RAP is required.

### **Comparison and Gap Analysis**

63. Both donors' safeguard policy and Indonesian AMDAL system divide a proposed project into categories (A, B, C and FI for donors; AMDAL, UKL-UPL, and SPPL in Indonesia), but the screening methodology is different. Most Donors screen both environmental and social aspects of the proposed project to identify potential significant impacts and categorize the project accordingly. Partly because environmental impacts (AMDAL) and involuntary resettlement (LARP) are governed in separate legal framework in Indonesia, Indonesian AMDAL regulation does not include the magnitude of social risks that may affect to the project as the one of the screening criteria for a project categorization. MOER No. 5/2012 stipulates that projects with the potentially significant impacts should be subject to AMDAL based on a prescribed list of sectors and protected area or directly bordering with the conservation area.

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64. The use of threshold has both advantages and disadvantages. In an ideal world, the screening should be purely scientific process in which the decision (category A, B or C as well as AMDAL or UKL-UPL) is made. In reality, however, the process is often influenced by other factors. A recent review by Independent Evaluation Group<sup>6</sup> found that several IFC category B projects would have been classified as category A if the World Bank's screening system would have been applied. The same study found that there is selection bias and pressure from investment departments to prefer category B instead of category A in order to speed up appraisal and implementation (p22).

65. There are cases where investments are approved without proper AMDAL report or even without AMDAL report at all<sup>7</sup>. Except for a national-level project, whether AMDAL is required or not in a proposed project is decided by local BPLHD officers whose decisions may be compromised by senior officials in the province/regency who would like to speed up the project preparation and implementation. The use of positive list and threshold may protect local BPLHD officers from such influence.

66. On the other hand, the reliance on threshold may lead to a decision that may not accurately reflect the real significance of environmental impacts. The threshold was created through negotiation between the Ministry of Environment and Forestry and sector ministries, and as such, the number is the result of political compromise as well as scientific rational. A project that is slightly below the threshold may still have significant environmental impact depending on its special characteristics. In other words, there is a risk that project that requires only UKL-UPL in Indonesian system may be required to carry out a full-EIA (Category A) if it were a donor-funded project. This will underline the "equivalence" of Indonesia's screening process with donors' safeguard policy and thus need to be addressed.

67. Although the screening process for a proposed activity/project Appendix II of MOER No. 5/2012 has accommodated the questions regarding the project location (whether the proposed project is adjacent or within the sensitive areas such as protected area, and not included in the exception list of activities for AMDAL), the checklists (questions) relates to the screening criteria as specified in Appendix IV of MOER No. 5/2012. Appendix IV explains project with UKL-UPL for proposing AMDAL and must be defined by Minister of Environment and Forestry.

### ***Recommendations***

68. To a project that will be financed by Donors, the social risks such as number of people affected by involuntary resettlement as specified in their safeguard policies should be included in the screening for determining the categorization. For instance, screening of category A & B projects should consider the number of people with direct effect and assets lost while category C projects involve no land acquisition.

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<sup>6</sup>The World Bank, Safeguards and Sustainability Policies in a Changing World - An Independent Evaluation of World Bank Group Experience (2010)

<sup>7</sup>Jakarta Post, "No AMDAL, no coal mining in Kalimantan: Ministry" (Jan 26, 2010), <http://www.thejakartapost.com/news/2010/01/26/no-AMDAL-no-coal-mining-kalimantan-ministry.html>

Table 2-4: Comparison between Requirements of Donor/Lenders and Indonesia Regulations for Screening

Item	ADB SPS 2009 : Environmental Safeguards : Policy Principle : 1	Indonesian EIA Regulatory Framework		Gap	Equivalency	Recommendation
		category	Criteria			
Project category	A, B, C, FI ADB screens the project category based on environmental, involuntary resettlement and Indigenous People considerations.	AMDAL, UKL-UPL, SPPL Indonesia policy screens the project category with considering law No. 32/2009.		<ul style="list-style-type: none"> <li>- ADB screens the proposed project based on significant impact on three aspects, i.e. environment, involuntary resettlement and Indigenous People as one unit in deciding a project category.</li> <li>- Indonesia determines the project category based on scale/magnitude of proposed activity defined in MOER No. 05/2012, Appendix I.</li> </ul>	- Partly equivalent for projects that are compulsory AMDAL	- Need to consider social risk for number of affected people by involuntary resettlement.
A	<p><u>Environmental Consideration:</u> If the proposed project is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented.</p> <p>If the propose project is located in or near sensitive and valuable ecosystems, (e.g. protected areas, wetlands, wild lands, coral reefs, and habitats of endangered species), or in or near areas with cultural heritage sites (e.g. archaeological, historical sites or existing cultural sites).</p> <p><u>Involuntary Resettlement Consideration:</u> If 200 or more persons will be physically displaced from home or</p>	AMDAL	<p>If the proposed project:</p> <ul style="list-style-type: none"> <li>- shall have potential significant impact on the environment;</li> <li>- included as the type of business/activity in the prescribed positive list in Appendix 1 of MOER No 05/2012 (sector and scale of the proposed business/activity plan); and or</li> <li>- is located within or directly bordering with the protected areas (listed in Appendix 3 of MOER No 05/2012);</li> <li>- excluded in the exception lists of Article 3, sub-article (4) point a to f;</li> </ul>	<ul style="list-style-type: none"> <li>- ADB has defined number of person affected for involuntary resettlement, is 200 persons or more and lose 10% or more of their productive or income-generating assets.</li> <li>- Indonesia defines based on scale/magnitude of the proposed activity listed in MOER No. 05/2012, Appendix I &amp; IV.</li> </ul>		

Item	ADB SPS 2009 : Environmental Safeguards : Policy Principle : 1	Indonesian EIA Regulatory Framework		Gap	Equivalency	Recommendation
		category	Criteria			
	lose 10% or more of their productive or income-generating assets.		<ul style="list-style-type: none"> <li>- is not included in the prescribe list of Appendix 1 of MOER No. 05/2012, but the proposed project shall have the significant impact.</li> <li>- shall have negative or adverse significant impact that cannot be reduced or eliminated by available technology.</li> </ul>			
B	<p><u>Environmental Consideration:</u></p> <p>If the proposed project's potential adverse environmental impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination (IEE), including an EMP, is required.</p> <p><u>Involuntary Resettlement Consideration:</u></p> <p>If less than 200 persons will be physically displaced from home or lose less than 10% of their productive or income-generating assets</p>	AMDAL		- ADB has defined number of persons who are displaced from home for involuntary resettlement, less than 200 persons or lose less than 10% of their productive or income-generating assets		
C	<p><u>Environmental Consideration:</u></p> <p>If the proposed project is likely to have minimal or no adverse environmental impacts. An EIA or IEE is not required, although</p>	UKL-UPL	- If the proposed project is not listed in MOER No. 5/2012	There is not gap	equivalent	

Item	ADB SPS 2009 : Environmental Safeguards : Policy Principle : 1	Indonesian EIA Regulatory Framework		Gap	Equivalency	Recommendation
		category	Criteria			
	<p>environmental implications need to be reviewed.</p> <p><u>Involuntary Resettlement Consideration:</u></p> <p>There is not involuntary resettlement</p>					
FI	If the proposed project involves the investment of ADB funds to or through a financial intermediary. The financial intermediary must apply and maintain an environmental and social management system, unless all of the financial intermediary's business activities have minimal or no environmental impacts or risks.					
		SPPL	- Business/activity that shall not have UKL-UPL and not have significant impact, as well as categorized into micro and small scale business (article 35 of Law No. 32/2009).			
Screenin process	Use REA checklist	<p>Screening process suits with Appendix II of MOER No. 05/2012.</p> <p>Although, the proposed project not requiring AMDAL may be proposed to have AMDAL by using question procedure in Appendix IV of MOER No. 05/2012.</p>		- REA checklist of ADB only mentions activities sector, while Indonesia uses activity list in Appendix I of MOER No. 05/2012 that mentions both activities sectors and magnitude/scale of those activities. In addition, the list has been developed based on scientific consideration (environmental bearing capacity and assimilative	equivalent	

Item	ADB SPS 2009 : Environmental Safeguards : Policy Principle : 1	Indonesian EIA Regulatory Framework		Gap	Equivalency	Recommendation
		category	Criteria			
				capacity) and ecosystem type that has been predicted to have potentially significant impact.		

### 2.3.2. ADB Environmental Safeguards Policy Principle 2 - Environmental Assessment

69. ADB specified in its SPS that environmental assessment is a generic term used to describe a process of environmental analysis and planning to address the environmental impacts and risks associated with a project.

- **Type of Impacts:** The type of impact relates to the environmental impact, including physical, biological, socio economic impacts. These can relate to occupational health and safety; community health and safety; vulnerable groups; gender issues; and impacts on livelihoods and physical cultural resources in an integrated ways (SPS, Appendix 1, paragraph 5).
  - **Project Site/Scope:** Impacts and risks will be analyzed in the context of the project's area of influence. This area of influence encompasses: (i) the primary project site(s) and related facilities that the borrower/client (including its contractors) develops or controls, such as power transmission corridors, pipelines, canals, tunnels, access roads, borrow pits and disposal areas, and construction camps; (ii) associated facilities that are not funded as part of the project (funding may be provided separately by the borrower/client or by third parties), and whose viability and existence depend exclusively on the project and whose goods or services are essential for successful operation of the project; (iii) areas and communities potentially affected by cumulative impacts from further planned development of the project, other sources of similar impacts in the geographical area, any existing project or condition, and other project-related developments that are realistically defined at the time the assessment is undertaken; and (iv) areas and communities potentially affected by impacts from unplanned but predictable developments caused by the project that may occur later or at a different location. The impacts and risks of project cycle and stages like as pre-construction, construction, operations, decommissioning, rehabilitation and restoration are also analyzed.
  - **Trans boundary Impacts:** The assessment will identify potential trans boundary effects, such as air pollution, increased use or contamination of international waterways, as well as global impacts, such as emission of greenhouse gasses and impacts on endangered species and habitats.
  - **Social Impact Assessment:** the borrowers/client is required to conduct socio-economic survey(s) and a census, with appropriate socioeconomic baseline data to identify all persons who will be physically and/or economically displaced and to assess the project's socioeconomic impacts on them. Normally, a cut-off date will be established for eligibility, to be documented and disseminated throughout the project area. The social impact assessment (SIA) must include: i) past, present and future potential social impacts; ii) an inventory of displaced persons and their assets; iii) an assessment of their income and livelihood; and iv) gender disaggregated information pertaining to the economic and socioeconomic condition of displaced persons. The SIA must also identify any individuals or groups who may be disproportionately affected due to their vulnerable status, and recommend mitigation measures to prevent disproportionate adverse impacts (SPS Appendix 2, paragraph 15 & 16).
  - **Assessment Process:** Environmental impacts must be determined in consultation with affected people and concerned non-governmental organization (NGOs).
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## **World Bank**

70. The World Bank has issued specific-safeguard policies consist of a special set of OPs and BPs, which are however not published in one separate document, in term of thematic coverage, has six environmental policies including general policies on Environmental Assessment (OP/BP Environmental Assessment, OP/BP 4.04 Natural Habitats, OP 4.09 Pest Management, OP/BP 4.11 Physical Cultural Resources, OP/BP 4.36 Forestry, OP/BP 4.37 Safety of Dams), but only two stand-alone social safeguard policies (OP/BP 4.12 Involuntary Resettlement, OP/BP 4.10 Indigenous Peoples). If compares to the range of topics in ADB, the World Bank's safeguard policies is deficient with regard to social issues compares to the ADB. At the World Bank, each OP takes an individual approach to define objectives and requirements, and almost every OP is complemented by a corresponding BP, which contains the respective procedural rules.

71. The World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines) are technical reference documents with general and industry-specific examples of good international industry practice. The EHS Guidelines contain the performance levels and measures that are normally acceptable to the World Bank Group including IFC. It is generally considered to be achievable in new facilities at reasonable costs by existing technology.

72. In addition, IFC of the World Bank Group requires its Client to apply its eight Performance Standards to manage environmental and social risks and impacts so that development opportunities are enhanced. As for the Assessment and Management of Environmental and Social Risks and Impacts, IFC requires the Client to establish and maintain an Environmental and Social Management System (ESMS) that appropriate to the nature and scale of the project and commensurate with the level of its environmental and social risks and impacts. The ESMS will incorporate the elements of: i) policy; ii) identification of risks and impacts; iii) management programs; iv) organizational capacity and competency; v) emergency preparedness and response; vi) stakeholders engagement; and vii) monitoring and review.

## **JICA**

73. The impacts to be assessed with regard to environmental and social considerations include impacts on human health and safety, as well as on the natural environment, that are transmitted through air, water, soil, waste, accidents, water usage, climate change, ecosystems, fauna and flora, including trans-boundary or global scale impacts. These also include social impacts, including migration of population and involuntary resettlement, local economy such as employment and livelihood, utilization of land and local resources, social institutions such as social capital and local decision-making institutions, existing social infrastructures and services, vulnerable social groups such as poor and indigenous peoples, equality of benefits and losses and equality in the development process, gender, children's rights, cultural heritage, local conflicts of interest, infectious diseases such as HIV/AIDS, and working conditions including occupational safety. Items to be addressed in the specific project are narrowed down to the needed ones through the scoping process.

74. In addition to the direct and immediate impacts of projects, the derivative, secondary, and cumulative impacts as well as impacts associated with indivisible projects will also be assessed with regard to environmental and

social considerations, so far as it is rational. The life cycle impact of a project period is also considered.

### ***Indonesia***

75. MOER No.16/2012 regarding Guidelines for Preparation of Environmental Documents explains that the environmental components to be studied are geophysical-chemical, biological, socio-economic and community health aspects. The geophysical-chemical component covers soil geological resources, surface water, underground water, air, noise, topography while the biological components cover some aspects such as vegetation/flora, fauna, ecosystem type, existence of rare animals and/or endemic and its habitat. The socio-economic and socio-cultural components are regulated by Head of Bapedal Decree No. 299/1996 regarding Technical Guidelines for Social Aspect Study in AMDAL Analysis Preparation.

76. MOER No. 16/2012 states scope of project or boundary of study area as well that cover project boundary, social boundary, ecological boundary, and administration boundary. In further the process of analysis toward all environmental components is carried out in the early of KA-ANDAL compilation by involving community via announcement and public consultation, which aimed to confirm Hypothetical Significant Impact (DPH) as was discussed by Technical Team of AMDAL Review Commission. Result for convergence of potential impacts into hypothetical impact will be analyzed more in preparation of further studies, that is ANDAL and RKL-RPL.

77. In accordance to the Decree of Head of Bapedal No. 299/1996, the scope and parameter of social component that should be analyzed are:

- Demography consists of: i) population structures by sex, by livelihood, by education and by religion; ii) population growth by birth rate, by mortality rate, migration pattern; and iii) labour (labour force participation rate and unemployment rate);
  - Economy consists of: household economy (income rate and double living pattern); natural resources economy (natural resources ownership and control; natural resources utilization pattern; land use pattern; land and other natural resources values and public owned natural resources/public property); local & regional economy (job and business opportunities, manufacturer process added value; type and total of non-formal economic activities; income distribution; multiplier effect; Gross Domestic Regional Product/GRDP; Regional Income; economic growth centers; public and social facilities and regional accessibility);
  - Culture consists of: cultural (customs, cultural norm and values); social process (associative process/cooperation, dissociative process/social conflict; acculturation; assimilation and integration; social cohesion); community social institutions; cultural heritage (archaeological sites and cultural heritages); social stratum (education, economy, livelihood, authority); power and authority (formal and informal leadership, formal and informal authority; society decision making mechanism; dominant group; leadership value friction); community's attitude and perception on the activity and ecological adaptation.
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### ***Comparison and Gap Analysis***

78. Deeper analysis for all aspects shall be raised in prior as hypothetic significant impact (DPH) during formulation of KA-ANDAL. It requires mutual agreement with Technical team of ARCs.

79. Social assessment mentioned in AMDAL document had been referred to MOER No. 16/2012 but census will not be conducted. Census is needed in the Ecological boundary land acquisition as a boundary study in AMDAL document.

Table 2-5: Comparison between Requirements of Donor/Lenders and Indonesia Regulations on Environmental Assessment

ADB SPS 2009 : Environmental Safeguards : Policy Principle : 2	Indonesian Regulations	Gap	Equivalency	Recommendation
<p>Environmental assessment comprises of:</p> <ul style="list-style-type: none"> <li>- Type of impacts: including physical, biological, socio economic impacts. These can relate to occupational health and safety; community health and safety; vulnerable groups; gender issues; and impacts on livelihoods and physical cultural resources in an integrated ways.</li> <li>- impact of project site/scope: (i) the primary project site(s) and related facilities; (ii) associated facilities that are not funded as part of the project; (iii) areas and communities potentially affected by cumulative impacts from further planned development of the project; and (iv) areas and communities potentially affected by impacts from unplanned but predictable developments caused by the project that may occur later or at a different location.</li> <li>- Trans boundary impact: such as air pollution, increased use or contamination of international waterways, as well as global impacts, such as emission of greenhouse gasses and impacts on endangered species and habitats.</li> <li>- Social impact assessment: conducts socio-economic survey and census, with appropriate socio-economic baseline data to identify all persons who will be physically and/or economically displaced and to assess the project's socio-economic impacts on them.</li> <li>- Assessment process: Environmental impacts must be determined in consultation with affected people and concerned non-governmental organization (NGOs).</li> </ul>	<p>Environmental assessment experts MOER No. 16/2012, comprising of:</p> <ul style="list-style-type: none"> <li>- Type of impact: including geophysical-chemistry, biology, socio- economy, and public health.</li> <li>- Project site/scope: <ul style="list-style-type: none"> <li>(i) Boundary project (primary activity and its supported facilities); and</li> <li>(ii) Social boundary (area that is on going social interaction).</li> </ul> </li> <li>- Trans boundary impact: ecological boundary is the impact can cross other regions or countries through a media, e.g. water and air</li> <li>- Social impact assessment: use MOER No. 16/2012 and Decree of head of Bapedal No. 299/1996 on technical guideline for social aspect assessment and AMDAL compiling. Social component that is analyzed consisting of demography, socio-economy, and cultural social defined as hipotetical significant impacts (DPH).</li> <li>- Assessment process: determination of DPH as TOR-KA has passed public participation process.</li> </ul>	<p>Social assessment is analyzed in AMDAL document referring to MOER No. 16/2012, though excluding socio-economy census, only implementation of socio-economy survey by sampling.</p> <p>Socio-economy census is carried out only for LARP study.</p>	<p>equivalent</p>	<p>There is not recommendation</p>

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### **2.3.3. ADB Environmental Safeguards Policy Principle 3 – Examination of Alternatives**

#### **ADB**

80. Alternatives are considered in the aspects of the proposed project site, technology, design, and operation—including the no project alternative—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. For each of the alternatives, it quantifies the environmental impacts to the extent possible, and attaches economic values where feasible. There should be a clear basis for selecting the particular proposed project design and, justifies recommended emission levels and approaches to pollution prevention and abatement.

#### **World Bank**

81. In OP 4.01. Annex B state Analysis of alternatives: This systematically compares feasible alternatives to the proposed project site, technology, design, and operation including the “without project” situation in terms of the following: the potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. For each of the alternatives, it quantifies the environmental impacts to the extent possible, and attaches economic values where feasible. It also states the basis for selecting the particular proposed project design, and offers justification for recommended emission levels and approaches to pollution prevention and abatement.

#### **JICA**

82. In JICA Guidelines for Environmental and Social Consideration, page 33 paragraph 3, Analysis of alternatives: This systematically compares feasible alternatives to the proposed project site, technology, design, and operation including the “without project” situation in terms of the following: the potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. For each of the alternatives, it quantifies the environmental impacts to the extent possible, and attaches economic values where feasible. It also states the basis for selecting the particular proposed project design, and offers justification for recommended emission levels and approaches to pollution prevention and abatement.

#### **Indonesia**

83. In the terms of reference (TOR) of AMDAL, there are alternative aspects. The MOER No. 16/2012 at appendix 1 states that Environmental impact analysis is a feasibility study of the environmental aspects. Therefore there are possibilities that a business plan components and/or activities have several alternatives, including alternative to locations, the use of equipments for production, capacity, technical specifications, business facilities and/or activities, the layout of buildings, time, duration of activities, and/or other alternative forms.

84. Alternatives can be assessed in the EIA that have been planned from the beginning or generated during the EIA review process. Functions and benefits of alternative assessments in the EIA are:

- Ensure that environmental considerations are integrated into the process of selecting an alternative to economic and technical factors;
- Ensure that the initiators and decision makers have to consider and apply the principles of prevention of pollution (pollution prevention) and/or damage to the environment in the context of environmental management;
- Provide an opportunity for stakeholders who are not fully involved in the decision making process, to evaluate various aspects of the business plan and/or activities and how the process is a decision that was finally approved;
- Provide a framework for decision-making that is transparent and based on scientific considerations.

85. If there are alternatives, the TOR then describes the framework of the process for the selection of alternatives. The explanation in this section should be able to give a picture of the systematic and logical process to generate alternatives to be studied, which include:

- Explanation of the rationale in determining the factors to be considered in assessing alternatives;
- Explanation of the procedures that will be used to carry out the selection of the alternatives, including how to identify, estimate and rationale be used to provide weighting, scale or ranking as well as ways to interpret the results;
- Explanation of the alternatives that have been selected to be studied further in EIA;
- Inclusion of libraries that will be or has been used as a source of information in alternatives selection.

### ***Comparison and Gap Analysis***

86. Both donors and Indonesia present procedures to select alternatives, including alternative locations, the use of equipments of production, capacity, technical specifications, business facilities and/or activities, the layout of the building, time, duration of activities, and/or other alternative forms.

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Table 2-6: Comparison between Requirements of Donor/Lenders and Indonesia Regulations on Examine Alternative

<b>ADB SPS 2009 : Environmental Safeguards : Policy Principle : 3</b>	<b>Indonesian Regulations</b>	<b><i>Gap</i></b>	<b>Equivalency</b>	<b>Recommendation</b>
ADB safeguard provides opportunity to seek alternative for project location; technology use; design; and implementation of project.	Indonesia regulation sets of alternative, including location, use of equipment for production, capacity, technical specification, facilities of business and/or activity, layout of buildings, time, activity duration, and/or other kinds alternatives.	There is not gap	equivalent	There is not recommendation

### **2.3.4. ADB Environmental Safeguards Policy Principle 4 - Environmental Management Plan**

#### **ADB**

87. The borrower/client will prepare an environmental management plan (EMP) that addresses the potential impacts and risks identified by the environmental assessment. The EMP will include the proposed mitigation measures, environmental monitoring and reporting requirements, emergency response procedures, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Where impacts and risks cannot be avoided or prevented, mitigation measures and actions will be identified so that the project is designed, constructed, and operated in compliance with applicable laws and regulations and meets the requirements specified in this document. The level of detail and complexity of the environmental planning documents and the priority of the identified measures and actions will be commensurate with the project's impacts and risks. Key considerations include mitigation of potential adverse impacts to the level of "no significant harm to third parties", the polluter pays principle, the precautionary approach, and adaptive management.

88. If some residual impacts are likely to remain significant after mitigation, the EMP will also include appropriate compensatory measures (offset) that aim to ensure that the project does not cause significant net degradation to the environment. Such measures may relate, for instance, to conservation of habitat and biodiversity, preservation of ambient conditions, and greenhouse gas emissions. Monetary compensation in lieu of offset is acceptable in exceptional circumstances, provided that the compensation is used to provide environmental benefits of the same nature and is commensurate with the project's residual impact.

89. The EMP will define expected outcomes as measurable events to the extent possible and will include performance indicators or targets that can be tracked over defined periods. It will be responsive to changes in project design, such as a major change in project location or route, or in technology, unforeseen events, and monitoring results.

90. At times, a third party's involvement will influence implementation of the EMP. A third party may be, inter alia, a government agency, a contractor, or an operator of an associated facility. When the third-party risk is high and the borrower/client has control or influence over the actions and behavior of the third party, the borrower/client will collaborate with the third party to achieve the outcome consistent with the requirements for the borrower/client. Specific actions will be determined on a case-by-case basis.

91. The borrower/client will use qualified and experienced experts to prepare the environmental assessment and the EMP. For highly complex and sensitive projects, independent advisory panels of experts not affiliated with the project will be used during project preparation and implementation.

The Table of content in EMP are:

- Summary of Impacts;
  - Description of Proposed Mitigation Measures;
  - Description of Monitoring Programs and Parameters;
-

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- Public Consultation Activities;
  - Description of the Responsibilities for Mitigation and Monitoring;
  - Requirements;
  - Preliminary Cost Estimates;
  - Description of the Responsibilities for Reporting and Review;
  - Work Plan;
  - Procurement Plan;
  - Cost Estimates;
  - Project Feedback and Adjustment.

### **World Bank**

92. A project's Environmental Management Plan (EMP) consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels. The plan also includes the actions needed to implement these measures. Management plans are essential elements of EA reports for Category A projects, for many Category B projects, the EA may result in a management plan only. To prepare a management plan, the borrower and its EA design team: (a) identify the set of responses to potentially adverse impacts; (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements. More specifically, the EMP includes the following components.

#### *Mitigation*

93. The EMP identifies feasible and cost-effective measures that may reduce potentially significant adverse environmental impacts to acceptable levels. The plan includes compensatory measures if mitigation measures are not feasible, cost-effective, or sufficient. Specifically, the EMP:

- (a) Identifies and summarizes all anticipated significant adverse environmental impacts (including those involving indigenous people or involuntary resettlement);
- (b) Describes-with technical details-each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
- (c) Estimates any potential environmental impacts of these measures; and
- (d) Provides linkage with any other mitigation plans (e.g., for involuntary resettlement, indigenous peoples, or cultural property) required for the project.

### *Monitoring*

94. Environmental monitoring during project implementation provides information about key environmental aspects of the project, particularly the environmental impacts of the project and the effectiveness of mitigation measures. Such information enables the borrower and the Bank to evaluate the success of mitigation as part of project supervision, and allows corrective action to be taken when needed. Therefore, the EMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the EA report and the mitigation measures described in the EMP. Specifically, the monitoring section of the EMP provides: (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to: (i) ensure early detection of conditions that necessitate particular mitigation measures; and (ii) furnish information on the progress and results of mitigation.

### *Capacity Development and Training*

95. To support timely and effective implementation of environmental project components and mitigation measures, the EMP draws on the EA's assessment of the existence, role, and capability of environmental units on site or at the agency and ministry level.<sup>3</sup> If necessary, the EMP recommends the establishment or expansion of such units, and the training of staff, to allow implementation of EA recommendations. Specifically, the EMP provides a specific description of institutional arrangements, which is responsible for carrying out the mitigating and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training). To strengthen environmental management capability in the agencies responsible for implementation, most EMPs cover one or more of the following additional topics: (a) technical assistance programs; (b) procurement of equipment and supplies; and (c) organizational changes.

### *Implementation Schedule and Cost Estimates*

96. For all three aspects (mitigation, monitoring, and capacity development), the EMP provides: (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and (b) the capital and recurrent cost estimates and sources of funds for implementing the EMP. These figures are also integrated into the total project cost tables.

### *Integration of EMP with Project*

97. The borrower's decision to proceed with a project, and the Bank's decision to support it, is predicated in part on the expectation that the EMP will be executed effectively. Consequently, the Bank expects the plan to be specific in its description of the individual mitigation and monitoring measures and its assignment of institutional responsibilities, and it must be integrated into the project's overall planning, design, budget, and implementation. Such integration

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is achieved by establishing the EMP within the project so that the plan will receive funding and supervision along with the other components.

## **JICA**

98. In JICA Guidelines for Environmental and Social Considerations page 33 paragraph 4, Environmental Management Plan (EMP). This describes mitigation, monitoring, and institutional measures to be taken during construction and operation in order to eliminate adverse impacts, offset them, or reduce them to acceptable levels.

99. Monitoring plans and environmental management plans, must be prepared, the costs of implementing such plans and systems, and the financial methods to fund such costs, must be determined. Plans for projects with particularly large potential adverse impacts must be accompanied by detailed environmental management plans.

## **Indonesia**

100. In MOER No. 16/2012, appendix 3, Environmental Management Plan (RKL) is the tackling of the environmental impact of business plans and/or activities. Environmental Monitoring Plan (RPL) is an effort to monitor the environmental components affected by a business plan and/or activities.

101. RKL pertains to efforts in preventing, controlling, and mitigating significant negative environmental impacts and other impacts and to increase possible positive impact arising as a result of business plans and/or activities. In that sense environmental management efforts include the following activities:

- a. The Environmental management has a purpose to avoid or prevent and control negative environmental impact;
- b. The Environmental management has a purpose to overcome or minimize or handle negative environmental impact caused by activities of business; and/or
- c. The Environmental management has a purpose to create positive environmental impact.
- d. The Management Plan shall contained:
  - o Managed impact;
  - o Source of impact;
  - o Indicator of succeeded management;
  - o Structure of management;
  - o Location of management;
  - o Periode of management; and
  - o Institution of management

102. The strategies for Environmental Management are technology, economic, and social.

103. Environmental monitoring is continuous activities, within planning and systematic procedure, as a relevant indicator to evaluate compliance, trend line and critical levels of environmental management. There are factors of concern in formulating the environmental monitoring plan:

- Environmental components/parameters that basically have been changed, or have received significant impact, including other components/environmental parameters that received other environmental impact;
- Aspects that are monitored is stated in Environmental Impact Assessment document (Andal), and environmental management planned must be in environmental management plan document;
- Monitoring can be done on sources of impact and/or on components/environmental parameters that received the impact. The monitoring process can evaluate the effectiveness of the environmental management;
- Monitoring should be economical. Cost for monitoring need to be minimized because monitoring activities are done continuously during the course of the project activity;
- Monitoring plan should contain the following:
  - Type of data collected;
  - Monitoring place;
  - Frequency and duration of monitoring;
  - Method of data collection;
  - Method of data analysis;
  - Institutions that monitor, use results and evaluate monitoring activities.

### ***Comparison and Gap Analysis***

104. There is partial equivalence between the environmental management of donors and Indonesia.

105. There are some similarities between the donors and Indonesia, in terms of proposed mitigation measures, environmental monitoring and reporting requirements, emergency response procedures, related institutional or organizational arrangements, implementation schedule, and performance indicators.

106. RKL-RPL does not include capacity development and training measures, cost estimate, project feedback, and adjustment.

### ***Recommendation***

107. It suggested RKL-RPL documents shall include capacity development aspect and training measures, cost estimate, project feedback, and adjustment.

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Table 2-7: Comparison between Requirements of Donor/Lenders and Indonesia Regulations on Environmental Management Plan

ADB SPS 2009 : Environmental Safeguards : Policy Principle : 4	Indonesian Regulations	Gap	Equivalency	Recommendation
<p>Environmental Management Plan (EMP) includes: the proposed mitigation/reduction measures, environmental monitoring and reporting requirement, emergency response procedures, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators.</p> <p>The Table of content in EMP is:</p> <ul style="list-style-type: none"> <li>• Summary of Impacts</li> <li>• Description of Proposed Mitigation Measures</li> <li>• Description of Monitoring Programs and Parameters</li> <li>• Public Consultation Activities</li> <li>• Description of the Responsibilities for Mitigation and Monitoring</li> <li>• Requirements</li> <li>• Preliminary Cost Estimates</li> <li>• Description of the Responsibilities for Reporting and Review</li> <li>• Work Plan</li> <li>• Procurement Plan</li> <li>• Cost Estimates</li> <li>• Project Feedback and Adjustment</li> </ul>	<p>MOER No. 16/2012, Appendix 3, Environmental Management Plan (RKL) contains measures for prevention, controlling and mitigation of significant impact, and develops positive impact through approach of technology, economy, and social. Environmental Monitoring Plan (RPL) is aimed to evaluate compliance level of project proponent on implementation of environmental management.</p> <ul style="list-style-type: none"> <li>• Environmental Management Plan (RKL) shall include: <ul style="list-style-type: none"> <li>○ Impacts to be managed;</li> <li>○ Sources of impact;</li> <li>○ Indicator of management success;</li> <li>○ Forms of managements;</li> <li>○ Location of management;</li> <li>○ Period of management; and</li> <li>○ Institutions of management.</li> </ul> </li> <li>• Environmental Monitoring Plan (RPL) shall consist of: <ul style="list-style-type: none"> <li>○ Type of data collected;</li> <li>○ Location of monitoring;</li> <li>○ Frequency and tme for monitoring;</li> <li>○ Method of data collection;</li> <li>○ Method of data analysis; and</li> <li>○ Institutions that monitor, use the result and evaluate activity of monitoring.</li> </ul> </li> </ul>	<p>RKL-RPL document is not including capacity development aspect and training measures, cost estimates, as well as project feedback and adjustment.</p>	<p>Partly equivalent</p>	<p>It suggest that RKL-RPL document shall include capacity development aspect and training measures, cost estimates, as well as project feedback and adjustment .</p>

### **2.3.5. ADB Environmental Safeguards Policy Principle 5 - Consultation and Participation of Community**

#### **ADB**

108. ADB requires the borrowers/clients to carry out meaningful consultation with affected people and facilitate their informed participation (*policy principle 5, Environmental Safeguards, SPS*). Meaningful participation is defined as a process that:

- (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle;
- (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people;
- (iii) is undertaken in an atmosphere free of intimidation or coercion; is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and
- (iv) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues (*paragraph 32, Safeguard Policy Statement*)

109. ADB requires public consultation in the environmental assessment process. For category A and B projects, the borrower must consult with groups affected by the proposed project and local non-government organization (NGOs). The consultation needs to be carried out as early as possible in the project cycle so that views of affected groups are taken into account in the design of the project and its environment mitigation measures. Such consultation will also take place during project implementation to identify and help address environmental issues that arise.

110. In accordance to ADB's Environmental Assessment Guidelines (2003), public consultation is mandatory as part of the EA process for category A and B projects supported by ADB. The ADB's safeguard policies for environment, resettlement, and indigenous people require public consultation at an early stage of the environmental assessment process. The adequacy of the public consultation and information disclosure is one of the criteria used to determine the project's compliance with the safeguard policies. For category A projects, ADB ensures that the borrower carries out public consultation at least twice: (i) once during the early stages of EIA field work; and (ii) once when the draft EIA report is available, and prior to loan appraisal by ADB.

111. The public consultation process needs to be described in the EIA reports. Consultation will be carried out in a manner commensurate with the impacts on affected communities. The consultation process and its results are to be documented and reflected in the environmental assessment report.

112. In accordance to the Best Practices for Public Consultation and Information Disclosure of ADB's Environmental Assessment Guidelines (2003), there is no formula for determining when public consultation should be applied, it generally should start early in an environmental assessment process. Communication during environmental assessments involves seeking information, imparting information or reaching agreement through dialogue. There are a number of approaches that involve public consultation and

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information dissemination. A critical element of preparing for public consultation is associated with the selection of appropriate approaches (see Table below). Available approaches may be categorized into 3 types: (i) disseminating information; (ii) soliciting input; and (iii) getting consensus on issues. The following approaches represent best practices for carrying out public consultation. The strategic considerations for public consultation and information disclosure at each environmental assessment process of the project cycle are as follows:

Table 2-8: Common Approach for Public Consultation

	<b>Disseminating Information</b>	<b>Soliciting Input</b>	<b>Getting Consensus</b>
<b>Approaches</b>	Printed materials, displays and exhibits, advertising, open house	Community liaison officer, survey and questionnaires, interviews, small public meetings, public hearing	Advisory panel, problem solving technique, consensus-building technique, arbitration
<b>Benefits</b>	- Reach large audience	- Allow immediate response and feedback	- Can address highly technical problems
	- Minimum demand on the public	- Allow s detailed and focused discussion	- Helps prioritize and reach consensus
	- Can provide detailed information	- Show sociological data and quantify opinions, priority and concerns	- Impartiality from an uninvolved party
		- Allow s direct communication and exchange of information and debate	
<b>Challenge</b>	- Ability to handle specific interest is low	- Potential conflicts between officer and employers	- Difficult to include full range of view s
	- Excludes illiterates	- Requires specialists to deliver and analyze to avoid bias	- May take a long time
	- Costs of preparation and staffing	- Can be diverted by special interest groups	- Requires highly skilled mediators
			- Difficult to identify an acceptable neutral party

Source: ADB's Environmental Assessment Guidelines (2003)

113. Through due diligence and review process, the operations department determines how the borrower/client has met or will meet the requirements on consultation and participation outlined in Safeguard Policy Statement. In particular, the project team pays special attention to ensure that vulnerable groups have sufficient opportunities to participate in consultations. For projects with significant adverse environmental impacts, ADB project teams will participate in consultation activities to understand the concerns of affected people and ensure that such concerns are addressed in project design and safeguard plans (*paragraph 19, OM Section F1/OP*).

114. Safeguard Requirements 3 (indigenous peoples) articulates that the borrower/client and ADB confirm whether there is broad community support from affected Indigenous Peoples communities when project activities include: (i) commercial development of the cultural resources and knowledge of Indigenous Peoples; (ii) physical relocation from traditional or customary lands; and (iii) commercial development of natural resources within customary lands under use that have potential impacts on the livelihoods or the cultural, ceremonial, or spiritual uses that define the identity and community of Indigenous Peoples. In such cases, ADB requires the borrower/client to document the processes and outcomes of consultation, and submit them to

ADB for review. The operations department verifies broad community support for the project through the review of these documents and its own investigation.

115. Regarding with complaint mechanism, Lender/client will establish a mechanism to accommodate and facilitate problem solving, complain and claim of project affected people (PAP) due to its environmental performance. This mechanism shall has equal scale toward adverse risks and impacts raised by project. It has to perform quick answer toward problems and complaint of the affected people by a process that recognizable, transparent, sensitive by gender, conformable with culture and reachable by all segments of affected people with no expensed cost and retribution. It shall not inhibit access to judicial or administrative settlement in a country. The information of this mechanism will be shared with project affected people appropriately.

### **World Bank**

116. For all Category A and B projects, the World Bank requests borrower/client to consults project-affected groups and local non-governmental organizations (NGOs) about the project's environmental aspects and takes their views into account during the EA process. The borrower is expected to initiate such consultations as early as possible, and for Category A projects, consultations should be held at least twice: 1) Shortly after environmental screening and before the terms of reference for the environmental assessment are finalized - a summary of the proposed project's objectives, description, and potential impacts should be provided; and 2) Once a draft environmental assessment report is prepared - a summary of the EA's conclusions should be provided. Consultation materials should be provided in a timely manner prior to consultation and in a form and language that are understandable and accessible to the groups being consulted (*paragraph 15, OP4.01*). In addition, the borrower consults with such groups throughout project implementation as necessary to address environmental assessment -related issues that affect them.

### **JICA**

117. JICA requests project proponents to carry out consultations with stakeholders and the records of such consultations to be prepared. JICA also requests that consultation shall take place after sufficient information has been disclosed to relevant stakeholders (Appendix 2, JICA Guidelines for Environmental and Social Considerations).

118. Following the World Bank's requirements, JICA notes that it is highly desirable to carry out consultations at least twice: 1) when the items to be considered in the EIA are being selected (scoping stage); and 2) when the draft report is being prepared. For Category B projects, JICA only encourages project proponents to consult with local stakeholders 'when necessary', but it is common practice that consultations are held at least twice.

### **Indonesia**

119. Indonesia has had a passion to provide correct information to the public as a form of public services. This has been guaranteed by law and regulations. They are: Law No. 14/2008 regarding Public Information

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Disclosure; Law No. 25/2009 regarding Public Service; and Government Regulation No. 96/2012 regarding implementation of Law No. 25/2009. The public consultation and participation and also information disclosure already stipulated in the regulation through MOER No. 17/2012 regarding The Public Involvement in AMDAL, MOER No. 17/2012 appendix 1 explains term of public involvement, those are: a) participation in the preparation of EIA documents through the announcement, the delivery of advice, opinion and community feedback and public consultation and public participation in the EIA review commission, the business plan and/or activities that are required to have EIA; b) The process of environmental permit application announcement, submission of suggestions, opinions and comments as well as the community after the announcement of an environmental permit issued, both for business and/or activities that are required to have an environmental impact analysis and business plan and/or activities that are required to have UKL – UPL.

120. The purpose of the public involvement in the EIA process and environmental permits are:

- Informing the community about the business plan and/or activities that have an important impact on the environment;
- The Public can submit suggestions, opinions and/or responses to the business plan and/or activities that have an important impact on the environment;
- The Community can be involved in the decision-making process related to eligibility or ineligibility recommendation over the business plan and/or activities that have an important impact on the environment;
- The Public can submit suggestions, opinions and/or responses to environmental permit process;
- The SPT (Suggestion, Opinion and Response letter) could be directed to Ministry, Governor, or Regent, depended on the scale of the project;
- Public can also participate in consultation before the making of KA-ANDAL. The methods of consultation were already elaborated including: meeting preparation, form of the consultation meeting, selection of the people representative, disclosed information, etc.

121. There are four points which will be considered in the regulation of the public involvement process for example:

- The community will be participated in the AMDAL process;
- Announcement of proposed business and/or activity plan;
- Implementation of public consultation; and
- Representation of the affected people in AMDAL Review Commissions (ARCs).

122. The community group that can be participated in the AMDAL process consist of: the people that are affected by the proposed business/activity plan (PAP), environmental observer (NGOs, academician, etc.), and public who affected by any decision in the AMDAL process.

123. Announcement about activity plan which covers scale, location, potential impact which is caused must be easily reached by the affected people. All information must be published in printing media such as local newspaper and/or national newspaper (according to the authorization of AMDAL assessor). Other

supporting social media also can be used for example brochure/pamphlet, banner, TV, website, short messages, radio, etc.

124. The duration of announcement time is 10 working days since it is being announced in the media. The community with their private identity can deliver their suggestion, opinion and respond in written about things which are related with descriptive information about the environment condition of the activity plan, local values related with the suggested activity plan and people's aspiration in terms of suggested activity plan.

125. Various forms of public consultation can be implemented by the proponent to capture effective and efficient information from the community by conducting methods like: workshop; seminar; focus group discussion; community's gathering; hearing forum; interactive dialogue or other methods that can be used two ways.

126. The content of material delivered in public consultation usually contains: name and address of the proponent; kind of activity; scale of activity; location and broad of activity; environment impact that may arise; and important environment component that need to be concerned.

127. All suggestions, opinions and responds from the community as the result of the announcement from media or public consultation are becoming the obligation of the proponent as inputs and consideration in conducting scoping in KA-ANDAL document.

128. The decision of people's representative who will be sitting on AMDAL Review Commissions is also being done during public consultation. The mechanism of the decision is done by considering some factors like: numbers of personnel and represent people's aspiration in terms of environment.

129. Obligation of people's representative is conducting routine consultation and communication with the affected people he/she represent and deliver people's aspiration in AMDAL Review Commission. Although, in practice, the implementation of his obligation is still questionable, but the regulation has facilitated the public involvement during ARC meeting, to submit the aspiration of the PAPs to the Project Proponents and related agencies in ARC.

130. The complaint mechanism is not available in AMDAL process, however, another ministerial regulation has been regulating it, that is in MOER No. 09/2012 regarding Procedure and Management of Complaint due to Environmental Pollution and/or Damage.

### ***Comparison and Gap Analysis***

131. The key question is whether the Indonesian requirements with regards to consultation and information disclosure are sufficient to carry out "meaningful" consultation, and there appear to be certain important gaps that need to be addressed. In general, donors request consultations to be held at least twice. Meanwhile in Indonesia, the public consultation is carried out once in the early of KA preparation. Although only applied once, its monitoring by public is accommodated by the representation in AMDAL Review Commission according to Government Regulation No. 27/2012 and MOER No. 17/2012. All input from public suggestions, opinions and responses (SPT) can be submitted to the concerned institution as the consideration to issue the environmental permit. Although there will be a bit concerns whether the selected PAP representatives have the capacity or capable to deliver the suggestions,

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opinions and responses from the PAP in the ARC meeting or vice versa and how such comments and inputs from the public can be incorporated in AMDAL document and how the documents addressed their concerns.

132. ADB requirements for project Category A to conduct at least twice public consultation, ADB classified a Project as Category A if the involuntary resettlement impacts of an ADB-supported projects are considered significant or if 200 or more persons will be physically displaced from home or lose 10% or more of their productive or income-generating asset. In Indonesia, there is a separate public consultation on the proposed development plan and business/activity for the land acquisition purpose which is stipulated based on separated Law (Law No. 2/2012 and Government Regulation No. 71/2012) and Ministry (Ministry in charge for land acquisition is Land Agency Board (BPN), and Head of BPN Regulation No. 5/2012 shall be applied for the involuntary resettlement. In Indonesian regulatory framework, for a development project in which involuntary resettlement shall be occurred, then the Law No. 2/2012 and its derivatives shall be implemented, or there will be public consultation related to the development plan in addition to the regulation of AMDAL. In this case, we can conclude that there will be at least twice public consultation shall be held also for the project with involuntary resettlement in Indonesia.

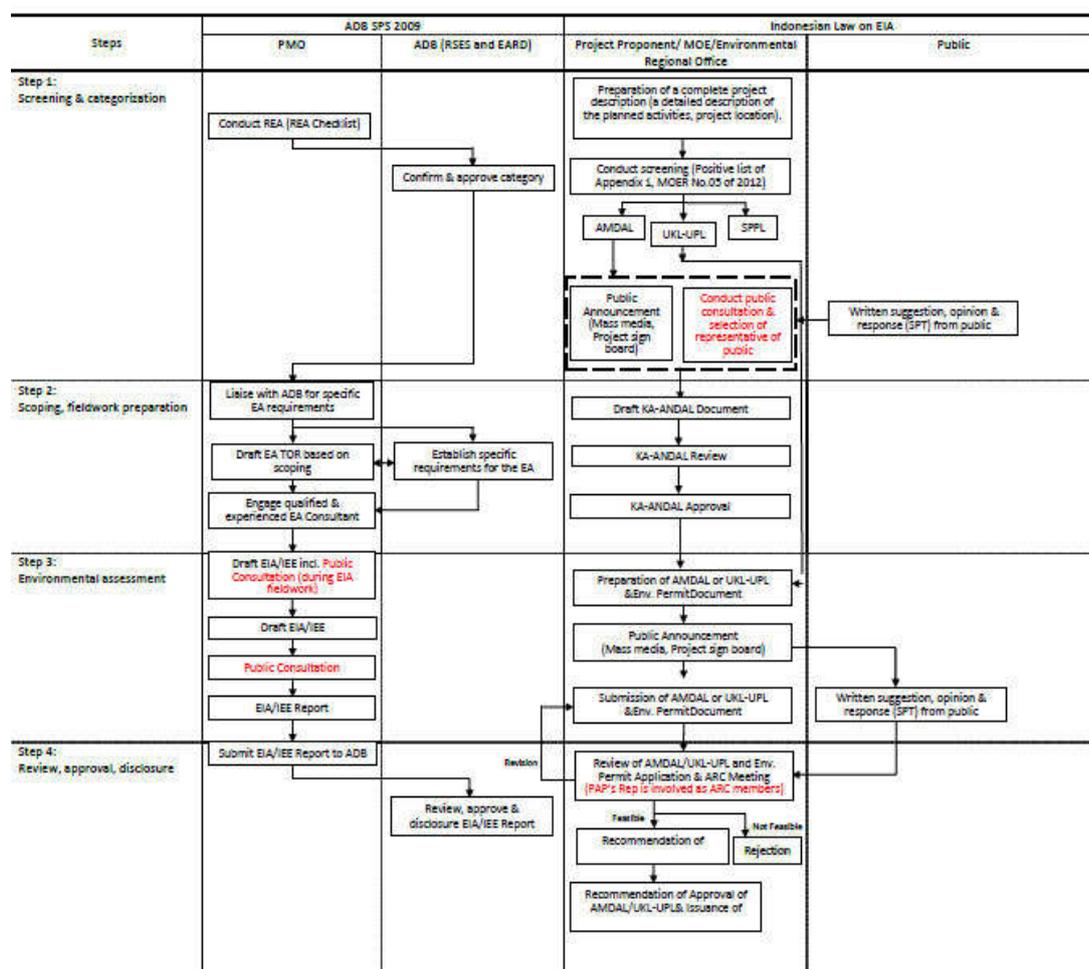


Figure 2-3: Comparison between Public Consultation under ADB and Indonesian EIA Regulation

133. The following figure shows LARP process based on the regulation on Law No. 2/2012 and Government Regulation No. 71/2012 on Land Acquisition for Development for Public Interests. The figures shows that there is at least one time public consultation for a development plan shall be implemented before the issuance of location permit for a development plan for public interests.

134. Both in Indonesian regulations of EIA and LARP, there is no specific stipulation related to the requirements of gender inclusive and responsive. Nevertheless, Indonesian Constitution (UUD 1945) has stipulated that the Law and Government guarantee the equality of citizens without any discrimination either on race, religion or gender. Law No. 39/1999 on Human Rights stipulated the equivalency of human rights in Indonesia, eliminates discrimination against women. Presidential Instruction of year 2000 stipulated about the Implementation Guidelines for Gender Mainstreaming in National Development.

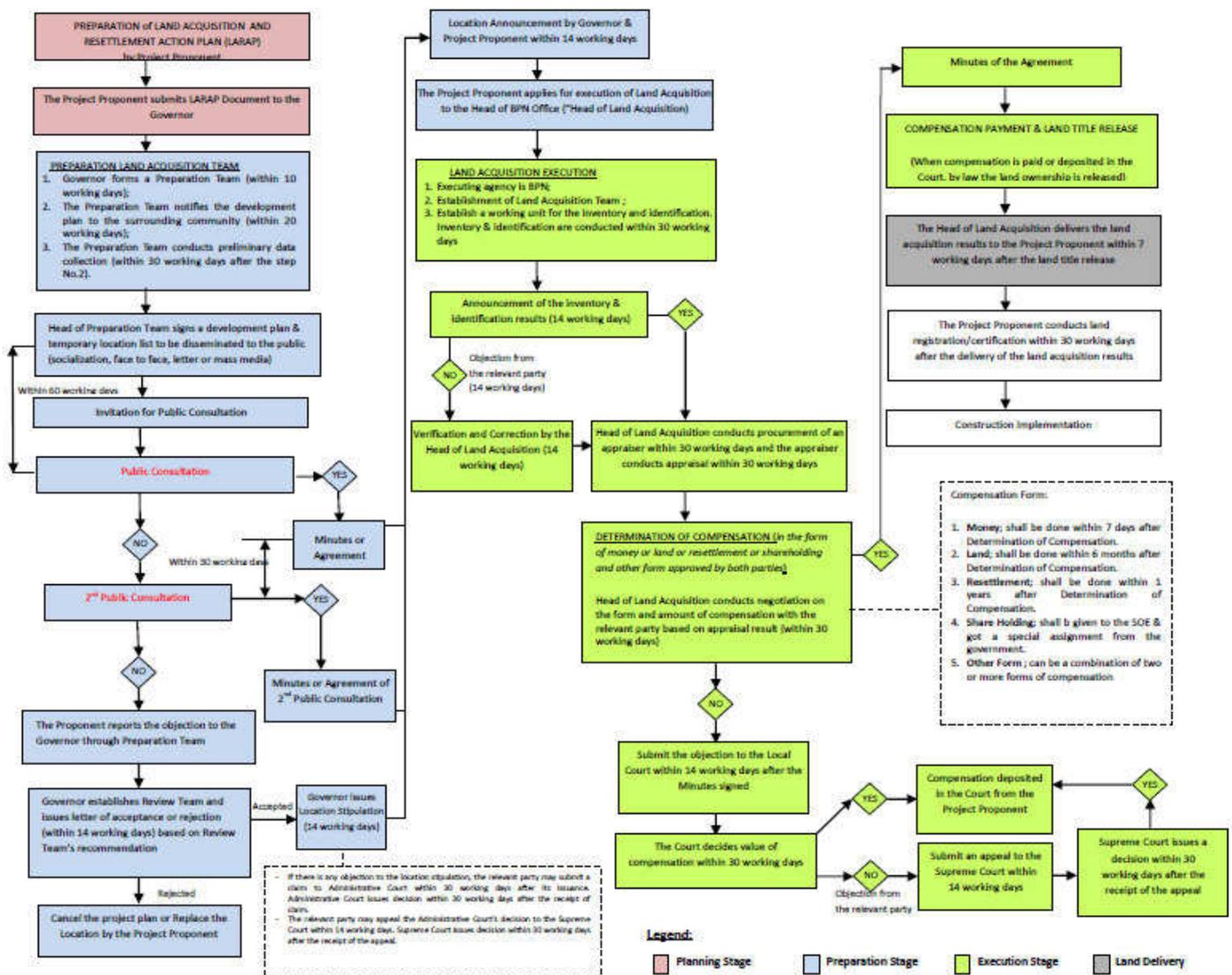


Figure 2-4: LARP Implementation Based on Indonesian Regulation on Land Acquisition for Public Interests

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135. While public announcement is made concerning the project during the preparation of AMDAL, questions remain whether they can constitute a “meaningful” consultation in several ways, including:

- Public can submit comment based on the project announcement, but how such comments are incorporated/not incorporated in the final AMDAL report is not clear;
- The mechanism lacks special attention to the poor and vulnerable groups. They still can submit their opinions and concerns, but they may not receive sufficient attention (no mechanism to highlight/sort concerns of vulnerable groups);
- Description of the project may contain technical information that is hard to understand. Consultation is an important opportunities for project proponent to explain the project and its likely impact in non-technical language and in a manner that is understandable to affected persons that cannot be substituted by the public announcement.

136. In accordance to the ADB’s Environmental Assessment Guidelines (2003) as shown in the Table above, basically announcement is one of the common approaches for public consultation by using printing materials, displays, advertising, etc. for disseminating information to the public. This type of information dissemination has the advantages that it may reach larger audience, minimum demand on the public and can provide detailed information. However, it has also several disadvantages such as the ability to handle specific interests is low, equal information shall be difficult to reach the illiterate groups. As for the feedback from the public for the announcements, public has the right to write their suggestions, opinions and responses (SPT) on the proposed business/activity plan. However, since the people who want to give comment should mention their ID in the written statement, sometimes in practice, people hesitates to freely put their comments and inputs in written statement with their ID recorded. It is also difficult to monitor whether the SPT from public has been accommodating or incorporating in the AMDAL report.

137. The management of claim/complain has not explicitly stated in AMDAL process for people finds difficult to deliver it to the authorized institution.

### ***Recommendations***

138. It is needed for ADB or other Donors to understand that Indonesia has implemented at least 2 times of public consultation, i.e.: 1) through direct public consultation during implementation of KA; and 2) through the representation of representatives of PAPs in ARC.

139. Procedure of complaint management shall be included in RKL-RPL document.

Table 2-9: Comparison between Requirements of Donor/Lenders and Indonesia Regulations for Public Participation

ADB SPS 2009 : Environmental Safeguards : Policy Principle : 5	Indonesian Regulations	Gap	Equivalency	Recommendation
<ul style="list-style-type: none"> <li>• Meaningful consultation process shall:               <ul style="list-style-type: none"> <li>- begin early in the project preparation stage and throughout the project cycle;</li> <li>- provide timely disclosure of relevant and adequate information, understandable and readily accessible to affected people;</li> <li>- be free of intimidation or coercion;</li> <li>- be gender inclusive, responsive and tailored to the needs of disadvantaged and vulnerable groups;</li> <li>- Enable incorporation of all relevant views of PAP and other stakeholders in decision making stage.</li> </ul> </li> <li>• ADB requires public consultation for project category A and B. Public consultation for project category A is implemented two times, i.e. (i) early stage and (II) draft EIA report stage.</li> </ul>	<ul style="list-style-type: none"> <li>• Within AMDAL process: before the preparation of TOR (KA), within public consultation stage and as representative affected people in AMDAL Review Commission.</li> <li>• Form of public involvement includes announcement, public hearing, and representative affected people in AMDAL Review Commission.</li> <li>• Public announcement is carried out three times (preparation of KA; submission of environmental permit; and after issuance of environmental permit) to obtain written suggestion, opinion and response (SPT); and one time for public consultation.</li> </ul>	<ul style="list-style-type: none"> <li>- Indonesia only carries out public consultation one time, although public surveillance is implemented through representative affected people in ARC.</li> </ul>	equivalent	Provide information to other Donors that more intensive public consultation is conducted for LARP activity and has been set by other regulations.
<ul style="list-style-type: none"> <li>• Borrower/client establish a grievance redress mechanism that the grievance should be addressed promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to all segments of the affected people without cost and retribution.</li> </ul>	<ul style="list-style-type: none"> <li>• The grievance mechanism does not exist in AMDAL process, though MOER No. 09/2010, sets public complaint related to environmental damage and pollution.</li> </ul>	<ul style="list-style-type: none"> <li>- Handling of grievance/complaint is not explicitly mentioned in AMDAL process, so there is difficulty to communicate it with related institutions.</li> </ul>	Partly equivalent	Includes procedure of grievance redress in RKL-RPL document.

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### **2.3.6. ADB Environmental Safeguards Policy Principle 6 - Information Disclosure**

#### **ADB**

140. ADB requires that the borrower submit the following documents for disclosure on ADB's website:

#### Category A projects

- i. Draft EIA: at least 120 days prior to ADB Board consideration, and/or environmental assessment and review framework before project appraisal, where applicable;
- ii. Final EIA upon receipt;
- iii. Supplementary reports, if required during project implementation;
- iv. Corrective action plan/s (for major non-compliance, if any) prepared during project implementation;
- v. Environmental monitoring reports.

#### Category B projects:

- i. Final IEE (upon receipt or Board approval, whichever is earlier);
- ii. A new or updated IEE, if required during project implementation;
- iii. Corrective action plan/s (for major non-compliance, if any) prepared during project implementation;
- iv. Environmental monitoring reports.

141. Lengthy and highly technical EIA or IEE reports may not meet the information needs of the affected people. Key findings of the environmental assessment (including the proposed project facilities and activities and their locations and duration, any impacts or risks to affected people and relevant mitigation measures, consultation process, and grievance mechanisms) may best be communicated in summary form through printed materials such as brochures, leaflets, or booklets, written in plain language understandable to the affected communities. In areas where some affected persons and stakeholders may be illiterate, non-written communication methods such as verbal presentations in community meetings, radio spots, and pamphlets and signs with pictorial depictions/illustrations may be utilized. Where appropriate, the full documents may be made available to interested stakeholders in the local language.

#### ***World Bank***

142. World Bank requires that regarding the meaningful consultations between the borrower and project-affected groups and local NGOs on all Category A and B projects proposed for IBRD or IDA financing, the borrower provides relevant material in a timely manner prior to consultation and in a form and language that are understandable and accessible to the groups being consulted.

143. For a Category A project, the borrower provides for the initial consultation a summary of the proposed project's objectives, description, and potential impacts; for consultation after the draft environmental assessment

report is prepared, the borrower provides a summary of the environmental assessment's conclusions. In addition, for a Category A project, the borrower makes the draft EA report available at a public place accessible to project-affected groups and local NGOs. The borrower/FI ensures that environmental assessment reports for Category A subprojects are made available in a public place accessible to affected groups and local NGOs.

## **JICA**

144. In JICA Guidelines for Environmental and Social Considerations page 12 paragraph 1. In principle, project proponents etc. disclose information about the environmental and social considerations of their projects. JICA assists project proponents etc. by implementing cooperation projects as needed.

145. JICA itself discloses important information about environmental and social considerations at the main stages of cooperation projects, in a manner in accordance with the guidelines. JICA discusses frameworks with project proponents etc. in order to ensure information disclosure, and comes to an agreement in an early stage of cooperation projects. The information to be disclosed includes that of environmental and social considerations and of the project cooperation itself. Besides the information to be disclosed publicly by JICA, JICA provides information about environmental and social considerations to third parties to the extent possible in response to requests. JICA encourages project proponents etc. to disclose and present information about environmental and social considerations to local stakeholders. Project proponents etc. disclose information well in advance when they have meetings with local stakeholders in cooperation with JICA. On these occasions, JICA supports project proponents etc. in the preparation of documents in an official or widely used language and in a form understandable by local people. JICA discloses information on its website in Japanese, English, and/or local languages, and provides related reports for public reading at its library and at related overseas offices.

146. JICA pays due consideration to the confidentiality of the commercial and other matters of Project proponents, taking into account their competitive relationships, and encourages them to exclude such confidential information from any documents on environmental considerations that they submit which may later be subject to public disclosure. JICA takes into account information control in Project proponents etc. and discloses their documents subject to their approval. Any information that is prohibited from public disclosure in the agreement between JICA and Project proponents etc. may be disclosed only through the agreement of Project proponents etc. or in accordance with legal requirements.

## **Indonesia**

147. MOER No.17/012 appendix 1 states that disclosure of information to the public is done via the announcement through newspapers and public consultation during the preparation of TOR.

148. Some necessary information that shall be disclosed by proponent are description of activity (kind, scale and location); potential environmental impact (potency for liquid waste occurrence, emission from funnel, public disquiet, etc.); and general concept for impact mitigation. The Minister of Environmental via Head of district/municipal environmental institution elaborates

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announcement regarding permit application that contain applicant's name and address, kind, scale and location of activity; information regarding where people may obtained AMDAL/UKL-UPL documents and downloadable website address.

149. Media for the announcement are newsprints such as local and national newspaper, brochure, banner; electronics such as television, social media, short messaging service (sms), radio; and bulletin boards, which reachable by all affected people. The announcement shall be in oral or written with proper and understandable language as well as to native/local language suit to activity location. Period of announcement is ten (10) working days.

150. Environmental Impact Assessment Document should be distributed to the competent institutions so that people can access it by reading or borrowing directly from those institutions through existing mechanisms at each institution. There is no obligation for the project proponent to upload EIA Document to the web. Regional Environmental Management Agency has no obligation to upload document to the Web.

151. Monitoring report published every six months must be submitted by project proponent to the appropriate government agencies and the Regional Environmental Management Agency. These institutions have no obligation to upload monitoring report to the web. The proponent has also no obligation to upload monitoring report to the web to be accessible by the public. The public can access document through the mechanism of each institutions (MOER No. 27/2012, article 53 point 2).

152. Law No. 14/2008 on Public Information, Chapter 1, article 4, says: (1) Everyone has the right to obtain public information in accordance with the provisions of this Act; (2) Everyone has the right:

- a. To See and know Public Information;
- b. Attend public meetings to obtain public information;
- c. Obtain copies of public information through an application in accordance with this Act; and/or
- d. Disseminate public information in accordance with the legislation.

### ***Comparison and Gap Analysis***

153. Donors and Indonesia have the same objective for providing information to the public about the activities of the proponent project.

154. EIA documents (donors and Indonesia) may be accessed by the public. AMDAL documents can be accessed in the form of hard copy through the mechanism of lending from the competent institution. There is no obligation for the project proponent to present them via the web. As such, the accessibility of the AMDAL document is limited. Not all people can easily access them.

155. This is in contrast to the Donor EIA. Donor EIA documents can be easily accessed by the public because it has been presented through the web.

156. Every six months the project proponent shall submit monitoring report.

157. Donors and Indonesia also have the same objective for providing information to the public about monitoring report.

158. Monitoring Report of donors can be easily accessed by the public because it has been presented through the web, in contrast with Monitoring

report of Indonesia that is not easily to be accessed by public, since it be presented by hardcopy only. However, it is not a principal matters since information transparency has been regulated in laws. Matter is only the at the proper wares as media for disseminating information that have not available yet.

Table 2-10: Comparison between Requirements of Donor/Lenders and Indonesia Regulations for Information Disclosure

ADB SPS 2009 : Environmental Safeguards : Policy Principle : 6	Indonesian Regulations	Gap	Equivalency	Recommendation
<p>ADB requires that the borrower submit the following documents for disclosure on ADB's website:</p> <ul style="list-style-type: none"> <li>• Draft EIA: at least 120 days prior to ADB Board consideration, and/or environmental assessment and review framework before project appraisal, where applicable<sup>19</sup></li> <li>• Final EIA upon receipt</li> <li>• Supplementary reports, if required during project implementation</li> <li>• Corrective action plan/s (for major non-compliance, if any) prepared during project implementation</li> <li>• Environmental monitoring reports</li> </ul> <p>Lengthy and highly technical EIA or IEE reports may not meet the information needs of the affected people, such as the proposed project facilities and activities; project location; project duration; any impacts or risks to affected people; and relevant mitigation measures.</p> <p>Media of information disclosure beside ADB website is brochures, leaflets, or booklets, written in plain language understandable to the affected communities. In areas where some affected persons and stakeholders may be illiterate, non-written communication methods such as verbal presentations in community meetings, radio spots, and pamphlets and signs with pictorial depictions/illustrations may be utilized.</p>	<ul style="list-style-type: none"> <li>• Disclosure information corresponds with MOER No.17/2012 through announcement to public in AMDAL preparation process and request of environmental permit.</li> <li>• Project proponent has to provide information on activities description (type, scale/magnitude, and location); potentially environmental impact (potential for liquid waste, potential emission from stack, potential public unrest, and others); and general concept of impact controlling/mitigation.</li> <li>• Minister of MOEF through head of regency/city environmental office submits announcement of request of environmental permit including some information such as name and address of the applicant; activities type, scale/magnitude and location; and information about where people can obtain AMDAL/UKL-UPL document and/or website address for those documents download.</li> <li>• Media of announcement is written media such as local and national newspaper, brochure, pamphlet, banner; electronic media such as television, social media, sms, radio; and announcement board that easily accessible by the affected people.</li> <li>• The announcement is delivered both written and non-written in clear and understandable</li> </ul>	<p>There is not gap.</p>	<p>equivalent</p>	<p>There is not recommendation</p>

<b>ADB SPS 2009 : Environmental Safeguards : Policy Principle : 6</b>	<b>Indonesian Regulations</b>	<b>Gap</b>	<b>Equivalency</b>	<b>Recommendation</b>
Where appropriate, the full documents may be made available to interested stakeholders in the local language.	<p>language for people, may also use local language in accordance with the activity location. Period of the announcement is 10 working days.</p> <p>People can access document in accordance with mechanism of each institution (MOER No. 27/2012, article 53 para. 2)</p> <p>Law of 14 of 2008 on Public Information, Chapter 1, article 4, says:            (1) Everyone has the right to obtain public information in accordance with the provisions of this Act; (2) Everyone has the right:</p> <ul style="list-style-type: none"> <li>a. To See and know Public Information;</li> <li>b. Attend public meetings to obtain public information;</li> <li>c. Obtain copies of public information through an application in accordance with this Act; and/or</li> <li>d. Disseminate public information in accordance with the legislation</li> </ul>			

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### **2.3.7. ADB Environmental Safeguards Policy Principle 7 - Implementation & Monitoring of EMP**

#### **ADB**

159. During the implementation phase, monitoring will be undertaken to: i) assess performance against agreed standards and criteria; ii) identify any environmental harm and non-compliance issues; iii) provide data to support compliance; and iv) meet government approval and permit conditions and ADB requirements. Depending on the project, the monitoring program specifies the parameters to be measured, monitoring/measurement methods, sampling locations, frequency of measurements, performance indicators or targets, detection limits, and thresholds limits that signal the need for corrective action.

160. Where external laboratories or other analytical services are required, certified agencies should be contracted to ensure that measurements and data provided are accurate, reliable, and defensible. Also, for projects with significant adverse environmental impacts (Category A), the borrower/client should retain qualified and experienced external experts or qualified NGOs to verify its monitoring findings. External experts or NGOs may need to conduct site inspections to review and verify the monitoring reports produced by the borrower/client.

161. ADB requires the borrower/client to prepare periodic environmental monitoring reports commensurate to project's potential risks and impacts. For projects designated as highly complex and sensitive, quarterly reporting to ADB is required. For other Category A projects, semi-annual reporting to ADB is required as a minimum during construction, and annually reporting is required during operation. For Category B projects, periodical reporting (normally annual or semi-annual, depending on the project) to ADB is required. These monitoring reports and related documents (including comments from external panel and responses by project proponent) are disclosed on ADB website.

162. If monitoring identifies a non-conformance against project approval, permit or EMP conditions, the borrower/client or its contractor may need to develop a corrective action plan to bring this into compliance. Corrective actions could range from improving the technical aspects of mitigation measures (e.g. increasing the bonded capacity around fuel storage tanks) to enhancing the environmental management capacity of implementing agency.

#### **World Bank**

163. Environmental monitoring during project implementation provides information about key environmental aspects of the project, particularly the environmental impacts of the project and the effectiveness of mitigation measures. Such information enables the borrower and the Bank to evaluate the success of mitigation as part of project supervision, and allows corrective action to be taken when needed. Therefore, the EMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the EA report and the mitigation measures described in the EMP. Specifically, the monitoring section of the EMP provides: (a) A specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) Monitoring and reporting procedures to: (i) Ensure early detection of conditions that necessitate particular

mitigation measures; and (ii) Furnish information on the progress and results of mitigation.

### **JICA**

164. After projects begin, project proponents etc. monitor whether any unforeseeable situations occur and whether the performance and effectiveness of mitigation measures are consistent with the assessment's prediction. They then take appropriate measures based on the results of such monitoring.

165. In cases where sufficient monitoring is deemed essential for appropriate environmental and social considerations, such as projects for which mitigation measures should be implemented while monitoring their effectiveness, project proponents etc. must ensure that project plans include feasible monitoring plans.

166. Project proponents etc. should make efforts to make the results of the monitoring process available to local project stakeholders.

167. When third parties point out, in concrete terms, that environmental and social considerations are not being fully undertaken, forums for discussion and examination of countermeasures are established based on sufficient information disclosure, including stakeholders' participation in relevant projects. Project proponents etc. should make efforts to reach an agreement on procedures to be adopted with a view to resolving problems.

### **Indonesia**

168. RKL-RPL and UKL-UPL documents that has been approved will include the signed statement letter prepared by the Project Proponent, indicating that the Project Proponent promised to implement the environmental management and monitoring as specified in the RKL-RPL/UKL-UPL documents within the certain period that has been agreed between the Project Proponent and the Environmental Office (Central, Provincial, District or City depended on its authorized areas). RKL-RPL/ UKL-UPL monitoring document shall be submitted to the Environmental Office at least every semester (twice a year), as a means for Environmental Office to monitor the implementation of environmental quality mitigation measures as specified in RKL-RPL/UKL-UPL documents. MOER No. 16/2012 in appendixes 3 and 4, explain the plan of data collection and analysis aspects that need to be monitored in UKL-UPL/RKL-RPL which include: the type of data collected; monitoring sites; the frequency and period of monitoring; methods of data collection (including equipment and instruments used for data collection); as well as the methods of data analysis.

169. Article 53 of Government Regulation No. 27/2012 about Environmental Permit also specified that environmental permit holder shall prepare and submit implementation report that stipulated as the requirements and obligations specified in the environmental permit periodically in every 6 (six) months (semi-annual).

170. RKL-RPL/UPL-UPL implementation report is a stage to measure and analyze the environmental quality trends of the projects. Guidelines to prepare the RKL-RPL/UKL-UPL implementation report has been regulated in the MOER No. 45/2005. MOER No. 45/2005 in appendix 1 that explains reporting mechanism; Project proponent is recommended to disclose the implementation

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report to the public in the form of an electronic file or on a website; project proponent gives report to the agency in charge of business and or activity concerned, agencies assigned to manage the environment at national, provincial and district/city; also project proponent activities are strongly encouraged to disclose information to the public , either in book form or other electronic information systems such as the Internet (Internet website). This appendix also explains that reporting must be performed every 6 (six) months.

171. In addition, there is a monitoring or supervision conducted by Environmental Inspection Officer (PPLH) in accordance to MOED No. 56/2002 regarding General Guidelines for the Environmental Compliance Supervision for PPLH. In this regard, PPLH will inspect the compliance on implementation of obligations of the Proponent in accordance to the regulations related to the environmental pollution and environmental degradation prevention and the obligations to conduct the environmental management and monitoring as has been agreed in AMDAL or UKL-UPL document or the environmental requirements as specified in related permits.

### ***Comparison and Gap Analysis***

172. Basically in terms of submission period of the RKL-RPL/UKL-UPL implementation report, ADB requires semi-annual report for Category A projects during construction and an annual report during the operation stage. Indonesia similarly also requires semi-annual RKL-RPL/UKL-UPL implementation reports. In Indonesia, the institution in charge of implementing environmental monitoring is the Project Proponent. The Environmental Inspection Officer (PPLH) at Environmental Office either in Central Provincial or District/City level in accordance to MOED No. 56/2002 depending on its authorized area is acted as the supervisor or inspector who shall check or inspect the site condition randomly based on the annual program that has been stipulated by their offices. Therefore, the monitoring by PPL is implemented not on the basis of the project, but is based on the PPLH annual program. Nevertheless, if any complaint arises from the public over the environmental conditions, PPLH shall directly conduct the inspection to check, inspect and investigate the actual conditions of the site as has been reported by the community.

173. The Project Proponent shall prepare semi-annual RKL-RPL/UKL-UPL reports for pre-construction, construction and post construction stages.

174. Donors especially ADB requires the involvement of third party such as the qualified and experienced external experts or qualified NGOs to verify the project's monitoring information. Monitoring of the implementation of RKL-RPL and/or UKL-UPL - is implemented by the Project Proponent and the involvement of third party is not required in Indonesian regulation. PPLH at Environmental Office at central, provincial or district/city level depending on its authority will acted as the supervisor or inspector. Monitoring or inspection that is conducted by PPLH or MOE is conducted randomly every year in accordance to the budget availability, except in case there is any complaint from the community.

175. The monitoring conducted by PPLH will be limited compared to the one conducted by the Donors. Donors use third parties to ensure the independency of monitoring the project. In Indonesia, the Proponent has the obligation to conduct the environmental management and monitoring activities as specified in the AMDAL or UKL-UPL documents. The supervision or inspection on the compliance of the implementation of the Proponent compliance on the

environmental management and monitoring including submission of monitoring reports and other activities is done by the Environmental Office through the PPL. However, the essence of monitoring work has been implemented in Indonesia. Budget availability is the constraining issue in proposing to third parties to implement the independent monitoring of each project. However, this issue can be bridged by the issuance of MOER No. 9/2010 which enable people to address any complain on the environmental issue especially on pollution and environmental degradation. The complaint shall be further handled by the working unit or the institutions concerned. In this regard, public also plays a role in conducting the environmental monitoring.

***Recommendation***

176. Donors must understand that it will be difficult for the Ministry of Environmental or the Environmental Office to involve any third party to be involved in conducting field monitoring based on the RKL-RPL/UKL-UPL implementation report submitted by the Project Proponent due to the budget constraint. However, the monitoring of environmental management and monitoring activities has been implemented by the Proponent, PPLH, Environmental Office and Ministry of Environment and Forestry and also by public through addressing the complaint in case of any pollution or environmental degradation that occurred in their surrounding area.

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Table 2-11: Comparison between Requirements of Donor/Lenders and Indonesia Regulations for Monitoring & Implementation

ADB SPS 2009 : Environmental Safeguards : Policy Principle : 7	Indonesian Regulations	Gap	Equivalency	Recommendation
<ul style="list-style-type: none"> <li>- Some items are implemented into monitoring such as parameters to be measured, monitoring/measurement methods, sampling locations, frequency of measurements, performance indicators or targets, detection limits, and thresholds limits that signal the need for corrective action</li> <li>- Use of external laboratories or other analytical services that should be certified.</li> <li>- For category project A has to retain qualified and experienced external experts or qualified NGOs to verify its monitoring findings, if necessary, conduct site inspections to review and verify the monitoring reports produced by the borrower/client.</li> <li>- ADB requires the borrower/client to prepare periodic environmental monitoring reports:               <ul style="list-style-type: none"> <li>• Quarterly reporting for highly complex and sensitive project;</li> <li>• Semi-annual reporting for category project A; and</li> <li>• Annually reporting for category project B</li> </ul> </li> <li>- These monitoring reports and related documents (including comments from external panel and responses by project proponent) are disclosed on ADB website</li> <li>- Corrective actions should be implemented if any find is not appropriated in the RKL-RPL agreement</li> </ul>	<ul style="list-style-type: none"> <li>- Following information shall include into monitoring report: kinds of data collected; monitoring location; frequency and period of monitoring; method of data collection (including equipment and instrument used for data collection); and method of data analysis.</li> <li>- It requires to use accredited environmental laboratory</li> <li>- Periodical reporting minimum in every six month (article 53 of Government Regulation No. 27/2012)</li> <li>- NGOs are not involved in implementation of monitoring. Although, the monitoring can involve third party as environmental supervision consultant and surveillance will be conducted by environmental office staff as well. The community can be actively participated in supervising implementation of environmental management through lodge complaint if any deviation in the implementation conducted by project proponent in their vicinity.</li> </ul>	<p>There is not gap</p>	<p>equivalent</p>	<p>Provide understanding to other Donors that limited budget is one reason in involving third party in implementation of monitoring activity.</p>

### 2.3.8. ADB Environmental Safeguards Policy Principle 8 - Protected Area and Biodiversity Conservation

#### **ADB**

177. The borrower/client will assess the significance of project impacts and risks on biodiversity and natural resources as an integral part of the environmental assessment process specified in paragraphs 4–10. The assessment will focus on the major threats to biodiversity, which include destruction of habitat and introduction of invasive alien species, and on the use of natural resources in an unsustainable manner.

178. The borrower/client will need to identify measures to avoid, minimize, or mitigate potentially adverse impacts and risks and, as a last resort, propose compensatory measures, such as biodiversity offsets, to achieve no net loss or a net gain of the affected biodiversity.

- **Modified Habitats:** In areas of modified habitat, where the natural habitat has apparently been altered, often through the introduction of alien species of plants and animals, such as in agricultural areas, the borrower/client will exercise care to minimize any further conversion or degradation of such habitat, and will, depending on the nature and scale of the project, identify opportunities to enhance habitat and protect and conserve biodiversity as part of project operations.
- **Natural Habitats:** In areas of natural habitat, the project will not significantly convert or degrade such habitat, unless the following conditions are met:
  - (i) No alternatives are available;
  - (ii) A comprehensive analysis demonstrates that the overall benefits from the project will substantially outweigh the project costs, including environmental costs;
  - (iii) Any conversion or degradation is appropriately mitigated.

179. Mitigation measures will be designed to achieve at least no net loss of biodiversity. They may include a combination of actions, such as post project restoration of habitats, offset of losses through the creation or effective conservation of ecologically comparable areas that are managed for biodiversity while respecting the ongoing use of such biodiversity by Indigenous Peoples or traditional communities, and compensation to direct users of biodiversity.

180. ADB policy for environmental safeguard has not explicitly set out policy principles and requirements addressing project impacts and risks in relation to pollution prevention and abatement (including greenhouse gas emissions), biodiversity and natural resource management, and physical cultural resources. Environmental assessments of projects address these issues in an ad hoc manner. Therefore ADB should consolidate environmental safeguard elements currently covered by other ADB sector policies and strategies. The environmental safeguard principles and requirements need to be articulated explicitly to include sectoral issues and cover (i) environmental assessment, (ii) pollution prevention and abatement, (iii) biodiversity and natural resource management, (iv) occupational and community health and safety, and (v) physical cultural resources (Paragraph 28- ADB SPS 2009).

181. **Critical Habitats:** No project activity will be implemented in areas of critical habitat unless the following requirements are met:

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- i). There are no measurable adverse impacts, or likelihood of such, on the critical habitat which could impair its high biodiversity value or the ability to function;
  - ii). The project is not anticipated to lead to a reduction in the population of any recognized endangered or critically endangered species or a loss in area of the habitat concerned such that the persistence of a viable and representative host ecosystem be compromised;
  - iii). Any lesser impacts are mitigated for at least there is "no net loss of biodiversity".

182. **Legally Protected Areas:** In circumstances where some project activities are located within a legally protected area, in addition to the requirement of critical habitat, the borrower/client will meet the following requirements:

- (i) Act in a manner consistent with defined protected area management plans;
- (ii) Consult protected area sponsors and managers, local communities, and other key stakeholders on the proposed project;
- (iii) Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area.

183. **Invasive Alien Species:** The borrower/client will not intentionally introduce any new alien species (that is, species not currently established in the country or region of the project) unless carried out in accordance with the existing regulatory framework for such introduction, if such a framework is present, or unless the introduction is subject to a risk assessment (as part of the environmental assessment) to determine the potential for invasive behavior. Under no circumstances must species known to be invasive be introduced into new environments. The borrower/client will undertake assessment of the possibility of accidental or unintended introduction of such invasive alien species and identify measures to minimize the potential for release.

184. **Management and Use of Renewable Natural Resources:** Renewable natural resources will be managed in a sustainable manner. Sustainable resource management is management of the use, development, and protection of resources in a way, or at a rate, that enables people and communities, including Indigenous Peoples, to provide for their current social, economic, and cultural well-being while also sustaining the potential of those resources to meet the reasonably foreseeable needs of future generations. This includes safeguarding the life-supporting capacity of air, water, and soil ecosystems. Where possible, the borrower/client will demonstrate the sustainable management of resources through an appropriate system of independent certification.

### ***World Bank***

185. The conservation of natural habitats, like other measures that protect and enhance the environment, is essential for long-term sustainable development. The Bank therefore supports the protection, maintenance, and rehabilitation of natural habitats and their functions in its economic and sector work, project financing, and policy dialogue. The Bank supports, and expects

borrowers to apply, a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development.

186. The Bank does not support projects that, in the Bank's opinion, involve the significant conversion or degradation of critical natural habitats.

187. Wherever feasible, Bank-financed projects are sited on lands already converted (excluding any lands that in the Bank's opinion were converted in anticipation of the project). The Bank does not support projects involving the significant conversion of natural habitats unless there are no feasible alternatives for the project and its siting, and comprehensive analysis demonstrates that overall benefits from the project substantially outweigh the environmental costs. If the environmental assessment indicates that a project would significantly convert or degrade natural habitats, the project includes mitigation measures acceptable to the Bank. Such mitigation measures include, as appropriate, minimizing habitat loss (e.g., strategic habitat retention and post-development restoration) and establishing and maintaining an ecologically similar protected area. The Bank accepts other forms of mitigation measures only when they are technically justified.

188. In deciding whether to support a project with potential adverse impacts on a natural habitat, the Bank takes into account the borrower's ability to implement the appropriate conservation and mitigation measures. If there are potential institutional capacity problems, the project includes components that develop the capacity of national and local institutions for effective environmental planning and management. The mitigation measures specified for the project may be used to enhance the practical field capacity of national and local institutions.

189. *Appropriate conservation and mitigation measures* remove or reduce adverse impacts on natural habitats or their functions, keeping such impacts within socially defined limits of acceptable environmental change. Specific measures depend on the ecological characteristics of the given site. They may include full site protection through project redesign; strategic habitat retention; restricted conversion or modification; reintroduction of species; mitigation measures to minimize the ecological damage; post development restoration works; restoration of degraded habitats; and establishment and maintenance of an ecologically similar protected area of suitable size and contiguity. Such measures should always include provision for monitoring and evaluation to provide feedback on conservation outcomes and to provide guidance for developing or refining appropriate corrective actions.

## **Indonesia**

190. Biodiversity is one of the international issues and Government of Indonesia (GOI) already issued and ratified international regulation about biodiversity such as issued by United Nations (UN), i.e. Law No. 5/1994 regarding Ratification of UN Convention regarding Biodiversity. GOI already issued Law No. 5/1990 regarding Bio-natural Resources and its Ecosystem. Regulation for an allowable area for an activity to be implemented shall refer to the Law No.26/2007 regarding Spatial Planning.

191. Definition of area according to Law No. 26/2007 for Spatial Planning is an area with a protection or cultivation function. The protection area is a confirmed area with the main function of protecting environmental sustainability, which covers natural resources and artificial resources. The cultivation area is

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a confirmed area with the main function of cultivation due to its natural conditions and patents, human resources and artificial resources. According to MOER No. 5/2012, Appendix III, there are 20 protection areas.

192. Presidential Decree No. 32/1992 regarding Protection Area Management states that the aim of this management is to prevent any possible damage towards the environmental functions (Article 2 Clause 1). Targets of the protection area management are: a) to improve protection function toward soil, water, climate, vegetation and animals as well as to the country's historical and cultural values, b). to maintain the diversity of flora, fauna, ecosystem type and nature uniqueness.

193. In Article 37 of the Presidential Decree No. 32/1992, it is prohibited to carry out any cultivating activity within the coverage of the protection area, unless there is no interference to the protective function, as stated in clause (1). In the natural and cultural preservation areas, it is allowed to carry out any cultivating activity unless for those relevant to its function and will not modify the existing landscape, land use condition and natural ecosystem, as stated in clause (2).

194. Treatment to normalize the protected area that has been used by a business/activity, for example mining activity, is by rehabilitation toward ex project location for the mentioned protected area may serve as it was (Article 38 Clause (4), Presidential Decree No. 32/1990).

195. Government Regulation No. 7/1999 regarding Preservation of Plants and Wildlife identified around 236 species of wildlife and 58 species of plants classified as protected species. MOER No. 29/2009 Regarding Guidelines for Biodiversity Conservation in the Area explains Biodiversity conservation planning (Chapter 2), Policy and the implementation of conservation, sustainable use of biodiversity and damage control (Chapter 3), Monitoring and supervision of the implementation of biodiversity conservation (Chapter 5), Resolution of conflicts in the use of biodiversity (Chapter 6).

196. The invasive alien species is regulated in Law No. 16/1992 regarding Animals, Fish and Plants Quarantine, and the Government Regulation No. 82/2000 regarding Animals Quarantine and Government Regulation No. 14/2002 regarding Plants Quarantine.

197. MOER No. 29/2009 provides Guidelines for Biodiversity Conservation, especially on policies, implementation, sustainable use and control of the biodiversity and guidelines for preparing the profile of biodiversity and guidelines for identifying the area with significant value for the biodiversity conservation for Local Area. However in its practice, this regulation has not been applied appropriately for there is no biodiversity data/information to be cited as reference. In the implementation of AMDAL study, the discussion of biological components is only limited to things that are mentioned in AMDAL preparation guidelines. Since there is no data/information available as well as no specific article that require for inputting biodiversity information in details, most of AMDAL document is prepared only by minimum requirements as stated in Guideline for AMDAL Compilation according to MOER No.16/2012.

198. One of the manners to maintain the environment is conservation of natural resources (Law No. 32/2009 Article 57 clause (1) point A. The definition of natural resources conservation is management on the natural resources for assuring its wise utilization and sustainable availability by remain maintaining

and improving its values quality and diversity (article (1) point 18, Law No. 32/2009).

### ***Comparison and Gap Analysis***

199. Modified habitat in the point of view of donor may be similar to the cultivation area, while for critical habitat, natural habitat and legally protected area may be similar to the protection area. Therefore, any prohibition of activities carried out in critical habitat, natural habitat and legally protected area as mentioned in the donor safeguard is carried out by the Government of Indonesia as well for it has stipulated in Presidential Decree No.32/1992 prohibiting any cultivation activities except those that do not interfere with the protecting function. However, there is an exception for geothermal aspects in which in Law No. 21/2014 regarding Geothermal, Article 5 clause (2) stated that indirect geothermal use is applicable in all areas of Indonesia, including Production Forest Area, Protection Forest Area, Preservation Forest Area and marine area.

200. Since activities in the protection area causes some significant impact AMDAL documents are required as stated in MOER No. 5/2012, Article 3 clause (1) regarding Plan of Enterprises and/or Activities to be carried out: a) in the protection area; and/or b) Adjacent directly with the protection area, shall be equipped with AMDAL.

201. In detail, the implemented activities directly adjacent to the protection area, as described in Article 3 clause (3) of MOER No. 5/2012 regarding Kind of Plan of Enterprises and or Activities to be carried out adjacent directly with protection area as referred to clause (1) point b, cover the plan of Enterprises and or Activities in which: a) the boundaries of project site are in tangent with the boundaries of the protection area; and/or b) potential impact of the plan of Enterprises or Activities is assumed will affect the nearest protection area.

202. However, there are exceptions for activities in the protection area that not are obliged to have AMDAL documents as mentioned in Article 3 clause (4) of MOER No. 5/2012, such as the following:

- a. Exploration of mining, oil and gas, and geothermal;
- b. Observation and development of sciences;
- c. Activities that support the preservation of protection area;
- d. Activities related to defense and security that have no significant impact towards the environment;
- e. Cultivation that have no actual significant impact towards the environment;
- f. Allowable cultivation for the native community with permanent coverage and will not reduce the protective function of the area under the strict monitoring.

203. Impact analysis on endangered species existence in the protection area is the main concern of donor because endangered and protected species should be strictly unharmed if the activity is carried out in the protection area. Biodiversity analysis as the mechanism for fulfilling the requirements upon

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possibility of harming endangered species is carried out in detailed on the completion to ESHIA documents. The biodiversity analysis in AMDAL study presents only a very superficial data based on the guidelines for environmental document preparation in MOER No.16/2012. It merely describes the protected species without detailed development for those existing endangered species and its management. It is still required for additional analysis for completing the impact toward the endangered species caused by an activity.

204. The management of biodiversity becomes main concern of Donor since the aims of the biodiversity analysis and its management are to protect and if possible, enhance significant habitats within the project site; to protect and restore the greenbelt to provide additional habitat for local wildlife; to protect and, if possible, improve the chances of survival of endangered species in the project area.

205. Biodiversity study should cover information among other: landscape and biodiversity of the project area which includes major habitat, flora, fauna, land use and main threats to biodiversity, and also biodiversity management plan (strategy and action plan).

206. Occurrence of new species enriches the diversity of specified habitat, however, the donor or the Government of Indonesia, through their policies, shall prevent the penetration of harmful foreign species. In this case, Government of Indonesia has the quarantine policy in Law No.16/1992 regarding quarantine of animals, plants and fishes, including its sub-ordinate regulations such as Government Regulation No. 82/2000 regarding Animal Quarantine and Government Regulation No. 14/2002 regarding Plants Quarantine. These regulations safeguarded the penetration of new pest and disease into an area.

### ***Recommendation***

207. A guideline for biodiversity specific analysis that covers strategy and action plan for protecting and avoiding lost of endangered species shall be prepared.

Table 2-12: Comparison between Requirements of Donor/Lenders and Indonesia Regulations on Content of Protected Area and Biodiversity Conservation

ADB SPS 2009 : Environmental Safeguards : Policy Principle : 8	Indonesian Regulations	Gap	Equivalency	Recommendation
<p>The borrower/client will assess the significance of project impacts and risks on biodiversity and natural resources. The assessment will focus on the major threats to biodiversity, which include destruction of habitat and introduction of invasive alien species, and on the use of natural resources in an unsustainable manner.</p> <p>Activities that are allowed in some habitats with specified requirements such as modified habitats (artificial habitats); natural habitats; critical habitats; and legally protected areas.</p> <ul style="list-style-type: none"> <li>- <b>Modified habitats</b>, Where the natural habitat has apparently been altered, often through the introduction of alien species of plants and animals, such as in agricultural areas.</li> <li>- <b>Natural habitats</b>, In areas of natural habitat, the project will not significantly convert or degrade such habitat, unless no alternatives are available; the overall benefits from the project will substantially outweigh the project costs; and any conversion or degradation is appropriately mitigated.</li> <li>- <b>Critical habitats</b>, No project activity will be implemented in areas of critical habitat unless the following requirements are met:</li> </ul>	<p>Government of Indonesia has ratified international regulation on biodiversity through the Law No. 5/1994 on United Nation convention regarding biodiversity, in fact, before issuing the above law, Indonesia has issued the the Law No. 5/1990 on conservation of bio-natural resources and its ecosystem concerning protection for biodiversity. Although, it seems not enough information for biodiversity, eventhough the MOER No. 29/2009 has issued.</p> <p>Classifications of habitats are critical, natural, and modified habitats mentioned in the Law No. 26/2007 on spatial planning. In the MOER No. 05/2012, Appendix III has set 20 kinds of protected area.</p>	<p>Management of biodiversity is compulsory for other Donors as mentioned in ADB SPS Para. 28 about critical habitats. Whereas, biodiversity assessment in Indonesia still less due to lack of information of biodiversity, therefore the assessment is not sufficient, there is not available the guideline of biodiversity assessment as well.</p>	<p>Not equivalent in assessment of biodiversity</p>	<p>Guideline of biodiversity assessment is necessary including strategy and action plan for protection and avoidance lost of endangered species shall be prepared .</p>

ADB SPS 2009 : Environmental Safeguards : Policy Principle : 8	Indonesian Regulations	Gap	Equivalency	Recommendation
<ul style="list-style-type: none"> <li>• There are no measurable adverse impactson the critical habitat which could impair its high biodiversity value or the ability to function;</li> <li>• The project is not anticipated to lead to a reduction in the population of any recognized endangered or critically endangered species or a loss in area of the habitat concerned; and</li> <li>• Any lesser impacts are mitigatedat least no net loss of biodiversity</li> </ul> <p>- <b>Legally protected areas</b>, where some project activities are located within a legally protected area, in addition to the requirement specified in critical habitats, the borrower/client will meet the following requirements:</p> <ul style="list-style-type: none"> <li>• Act in a manner consistent with defined protected area management plans;</li> <li>• Consult protected area sponsors and managers, local communities, and other key stakeholders on the proposed project; and</li> <li>• Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area.</li> </ul> <p>Mitigation measures will be designed to achieve at least no net loss of biodiversity. They may include a combination of actions, such as postproject restoration of habitats, offset of losses through the</p>	<p>Utilization of protected area has been regulated in the Presidential Decree (Keppres) No. 32/1990 on management of protected area. Article 37 of the Keppres No. 32/1990 sets that any cultivation activity are forbidden in the protected area, unless the activity does not inhibit function of protection (Para. 1). In natural and cultural preservation area is prohibited for any cultivation activity unless for those relevant to its function and will not modify the existing landscape, land use condition and natural ecosystem (Para. 2). Also the Law No. 21/2014 allows geothermal activity in protected area and conservation area.</p> <p>In the MOER No. 05/2012, proposed activity that is in or directly adjacent with protected area is required to prepare AMDAL document. Although, there is exception for some activities in protected area are not required preparing AMDAL stated in Article 3 Para 4.</p> <p>Mitigation measures for use of protected area is such as rehabilitation and reclamation for former project area</p> <p>Protection measures for invasive alien species can be implemented referring to the Law No. 16/1992 on quarantine of animals, fish and plants, and the law derivatives are Governmental Regulation No. 82/2000 on quarantine of animals and Government</p>			

ADB SPS 2009 : Environmental Safeguards : Policy Principle : 8	Indonesian Regulations	Gap	Equivalency	Recommendation
<p>creation or effective conservation of ecologically comparable areas that are managed for biodiversity while respecting the ongoing use of such biodiversity by Indigenous Peoples or traditional communities, and compensation to direct users of biodiversity.</p> <p>- <b>Invasive alien species</b>, The borrower/client will not intentionally introduce any new alien species (that is, species not currently established in the country or region of the project) unless carried out in accordance with the existing regulatory, unless the introduction is subject to a risk assessment to determine the potential for invasive behavior. The borrower/client will undertake assessment and identify measures to minimize the potential for release.</p> <p><b>Management and use of renewable natural resources</b>, renewable natural resources will be managed in a sustainable manner. Sustainable resource management is management of the use, development, and protection of resources in a way, or at a rate, that enables people and communities, including Indigenous Peoples, to provide for their current social, economic, and cultural well-being while also sustaining the potential of those resources to meet the reasonably foreseeable needs of future generations.</p>	<p>Regulation No. 14/2002 on quarantine of plants.</p> <p>Conservation measures for natural resources is a effort in preservation of environment (Law No. 32/2009, Article 57, Para. 1, point a).</p>			

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### 2.3.9. ADB Environmental Safeguards Policy Principle 9 - Pollution Prevention

#### **ADB**

208. In determining appropriate environmental standards for ADB projects, ADB will follow the standards and approaches laid out in the World Bank's Pollution Prevention and Abatement Handbook.

209. During the design, construction, and operation of the project the borrower/client will apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines. These standards contain performance levels and measures that are normally acceptable and applicable to projects. When host country regulations differ from these levels and measures, the borrower/client will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, the borrower/client will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in this document.

- **Pollution Prevention:** The borrower/client will avoid, or where avoidance is impossible, will minimize or control the intensity or load of pollutant emission and discharge. In addition the borrower/client will examine and incorporate in its operations resource conservation and energy efficiency measures consistent with the principles of cleaner production. When the project has the potential to constitute a significant source of emissions in an already degraded area, strategies that help improve ambient conditions, such as evaluating alternative project locations and considering emissions offsets, will be introduced.
- **Wastes:** The borrower/client will avoid, or where avoidance is not possible, will minimize or control the generation of hazardous and non-hazardous wastes and the release of hazardous materials resulting from project activities. Where waste cannot be recovered or reused, it will be treated, destroyed, and disposed of in an environmentally sound manner. If the generated waste is considered hazardous, the client will explore reasonable alternatives for its environmentally sound disposal considering the limitations applicable to its Trans boundary movement. When waste disposal is conducted by third parties, the borrower/client will use contractors that are reputable and legitimate enterprises licensed by the relevant regulatory agencies.
- **Hazardous Materials:** The borrower/client will avoid the manufacture, trade, and use of hazardous substances and materials subject to international bans or phase outs because of their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer and will consider the use of less hazardous substitutes for such chemicals and materials.
- **Pesticide Use and Management:** The environmental assessment will ascertain that any pest and/or vector management activities related to the project are based on integrated pest management approaches that entail coordinated use of pest and environmental information along with available pest/vector control methods, including cultural practices, biological, genetic and, as a last resort, chemical means to prevent unacceptable levels of pest

damage and aim to reduce reliance on synthetic chemical pesticides in agricultural and public health projects. The health and environmental risks associated with pest management should be minimized with support, as needed, to institutional capacity development, to help regulate and monitor the distribution and use of pesticides and enhance the application of integrated pest management. The borrower/client will not use products that fall in World Health Organization Recommended Classification of Pesticides by Hazard Classes Ia (extremely hazardous) and Ib (highly hazardous) or Class II (moderately hazardous), if the project host country lacks restrictions on distribution and use of these chemicals, or if they are likely to be accessible to personnel without proper training, equipment, and facilities to handle, store, apply and dispose.

- **Greenhouse Gas Emission:** The borrower/client will promote the reduction of project-related anthropogenic greenhouse gas emissions in a manner appropriate to the nature and scale of project operations and impacts; quantify direct emissions from the facilities within the physical project boundary and indirect emission associated with the off-site production of power used by the project during the development or operation of projects that are expected to or currently produce significant quantities of greenhouse gases; conduct quantification and monitoring of greenhouse gas emissions annually in accordance with internationally recognized methodologies; evaluate technically and financially feasible and cost-effective options to reduce or offset project-related greenhouse gas emissions during project design and operation, and pursue appropriate options.

### **World Bank**

- **Pollution Prevention:** The borrower/client will avoid the release of pollutants or when avoidance is not feasible, minimize and/or control the intensity and mass flow of their release (to air, water, and land to routine, non-routine and accidental circumstances with the potential of local, regional and trans boundary impacts).
    - **Wastes:** The borrower/client will avoid the generation of hazardous and non-hazardous waste materials. If unavoidable, the borrower/client will reduce the generation of waste, recover and reuse waste in a manner that is safe for human health and the environment, or will treat, destroy or dispose it in an environmentally sound manner.
    - **Hazardous Materials Management:** The borrower/client will avoid or, when avoidance is not possible, minimize and control the release of hazardous materials. Any production, transportation, handling, storage and use of hazardous materials for project activities should be assessed.
    - **Pesticide Use and Management:** The borrower/client will, where appropriate, formulate and implement an integrated pest management (IPM) and/or integrated vector management (IVM) approach, along with available pest control methods, including cultural practices, biological, genetic and targeting to the economically significant pest infestations and disease vectors of public health significance. When include use of chemical pesticides, the borrower/client will select low in human toxic chemical pesticide.
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- **Resource Efficiency:** The borrower/client will implement technically and financially feasible and cost effective measures for improving efficiency in its consumption of energy, water, as well as other resources and materials inputs, with a focus on areas that are considered core business activities. Such measures will integrate the principles of cleaner production into product design and production processes with the objective of conserving raw materials, energy and water.
  - **Water Consumption:** The borrower/client will adopt measures that avoid or reduce water usage so that the project's water consumption does not have significant adverse impacts on others. The measures, shall include but not limited to the use of additional technically feasible water conservation measures in the operations, the use of alternatives water supplies, water consumption offsets to reduce total demand for water resources to within the available supply and evaluation of alternative project location.
  - **Greenhouse Gases:** The borrower/client will consider alternatives and implement technically and financially feasible and cost-effective options to reduce project-related GHG emissions during the design and operation of the project, including but not limited to, alternative project locations, adoption of renewable or low carbon energy sources, sustainable agricultural, forestry and livestock management practices, the reduction of fugitive emissions and the reduction of gas flaring. For projects that are expected or currently produced more than 25,000 tonnes of CO<sub>2</sub> equivalent annually, the borrower/client will quantify direct emissions from the facilities owned or controlled within the physical project boundary.

### ***Indonesia***

- **Resource Efficiency & Pollution Prevention:** Law No. 32/2009 regarding Environmental Protection and Management (EPM) Article 3 mentioned that EPM is intended to prevent Indonesia's territory from the environmental pollution and/or damages, control the natural resources usage wisely and establish the sustainable development. Principally, the natural resources efficiency is something that must be reflected in the implementation of any activity.

210. The instruments usually used for pollution prevention and/or environmental degradation in Indonesia are Strategic Environmental Assessment (SEA), spatial planning, environmental quality standards, environmental damage criteria, AMDAL, UKL-UPL, permit, environmental economic instrument, regulations and laws based on environmental, budget based on environmental, environmental risk analysis, environmental audit and other instruments based on the needs and/or development of science.

211. Control on pollution and/or environmental degradation shall be implemented by Central Government, Local Government and Proponent in accordance to the role, tasks and function.

212. In addition, MOER No. 16/2012 also has specified that AMDAL Study should ensure the inclusion of all considerations and application of the pollution and/or the environmental degradation prevention in the framework of environmental management. In this regard, it can be concluded that AMDAL required the Proponent to implement measures to use the efficient natural resources and to include measures to prevent or minimize the pollution.

213. The implementation of energy efficiency is reflected in the Law No. 30/2007 regarding Energy and also Government Regulation No. 70/2009 regarding Energy Conservation, President Instruction No. 3/2011 regarding Energy and water efficiency and also Ministry of Mineral Sources Energy Regulation No. 3/2012 regarding Efficiency of electricity utilization. Article 12 of Government Regulation No. 70/2009 described that the user of energy that utilizes > 6.000 equal oil tone should conduct energy conservation through energy management. One of energy management plan is to prepare of energy conservation program article 12 (3) of Government Regulation No. 70/2000. The program of energy conservation consists of: utilization of energy efficiency equipment, kind and energy consumption, and steps on energy conservation.

214. Energy and pollution prevention issues are also reflected in the cleaner production, which is regulated by MOER No. 31/2009. The definition of cleaner production is the management strategy which prevents, integrates and apply upstream to downstream related with production process, products and services to improve natural utilization efficiency, to prevent pollution and to reduce waste at the source so as to minimize risk to human health and safety as well as environmental damage (MOER No. 31/2009, article 1 item 4) regarding Supervision and Monitoring of the Environmental Management System, Eco-labeling, Cleaner Production and Environmental Friendly Technology Application at Local Area. The concepts of cleaner production are: pollution prevention, waste minimization, recycling, pollution control, treatment and disposal, remediation (Sources: Bratasida, L.Cleaner Production Practiced Concept, Round Table Conference - II, Jakarta - 1997).

215. In regard with environmental quality standard, several Government Regulations and Minister of Environment Regulations (MOER) have been stipulated to determine the quality standard for liquid waste, effluent surface water, sea water quality, emission gas, ambient air quality, etc, as shown in the following figures:

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- **Greenhouse Gas Emission:** Government of Indonesia has the commitments to determine and implement on global climate change policy as has been regulated in the Law No. 32/2009 and through Clean Development Mechanism, Bilateral Offset Credit Mechanism (BOCM) and also National Appropriate Mitigation Action (NAMA's), as implemented in National Action Plan on Greenhouse Gas Action Plan (RAN GRK) regulated in the President Regulation No. 61/2011 and President Regulation No. 71/2011 regarding the Implementation of National Greenhouse Gas Inventory. Several sectors as target for decreasing gas emission i.e.: agriculture; forestry and peat land; energy and transportation; industry; waste treatment; others supporting activity, such as BMKG, Ministry of Environment, Ministry of Marine Affairs and Fishery.

As to enabling the implementation of the Presidential Regulation No. 71/2011, Minister of Environment has issued his regulation No. 15/2013 on the Measuring, Reporting and Verification of Climate Change Mitigation Action, which specified the procedures to measure report and verified the climate change mitigation action.

The requirement to include greenhouse gas analysis is not explicitly specified in MOER No.16/2012, however, Government of Indonesia has committed to implement climate change mitigation action.

- **Water Consumption:** The water consumption issue has been integrated in AMDAL preparation. The issue of water balance always stated in the description of project. Related with usage of water. And also the topics always are assessed and evaluated as well as to be managed.

### ***Comparison and Gap Analysis***

217. The energy conservation has not been explicitly stated in Ministry of Environmental Regulation No. 16/2012 for it is available at another regulation that is Government Regulation No. 70/2009 regarding Energy Conservation. It is similar to climate change and net product issues.

218. As known the regulations have been issued by Guideline for EHS like as air emissions and ambient air quality, noise, energy conservation, wastewater and ambient water quality, water conservation, hazardous material management, waste management and contaminated land. Likewise the regulations of Indonesia also have issued as stipulated table below. In Indonesia, some regulations have been issued for pollution prevention and energy conservation, however, it still need more additional regulations for other environmental quality standards like as sediment quality, Indonesia uses abroad quality standard for sediment.

Table 2-13: Comparison available regulations about pollution prevention issues

No	EHS Guideline	Indonesia Standards	Content
1	Air Emissions & Ambient Air	Government Regulation No. 41/1999	Air Pollution and Control

No	EHS Guideline	Indonesia Standards	Content
	Quality	MOER No. 13/2009	Standard of non moving source for oil and gas
		MOER No. 4/2009	Standard of discharge gas emission for new vehicle type
		MOER No. 17/2008	Standard of non moving source for ceramic industry
		MOER No. 18/2008	Standard of non moving source for black carbon industry
		MOER No. 21/2008	Standard of non moving source for thermal electric generation
		MOER No. 07/2007	Standard of non moving source for steam boiler
		MOER No. 05/2006	Standard of discharge gas for old vehicle type
		MOED No. 133/2004	Standard of emission for fertilize industry
		MOED No. 49/1996	Standard for vibration
		MOED No. 50/1996	Standard for odor
		MOED No. 13/1995	Standard of non moving emission
2	Energy Conservation	Law No. 30/2007	Energy
		Government Regulation No. 70/2009	Conservation Energy
3	Wastewater and ambient water quality	Government Regulation No. 82/2001	Water Quality Management & Water Quality Control
		MOER No. 5/2010	Standard of waste water for sugar industry
		MOER No. 6/2010	Standard of waste water for cigarette
		MOER No. 8/2009	Standard of waste water for Thermal electric generation
		MOER No. 9/2009	Standard of waste water for medicine industry
		MOER No. 10/2009	Standard of waste water for Basic Oleochemic
		MOER No. 11/2009	Standard of waste water for cow and pig livestock
		MOER No. 21/2009	B Standard of waste water for iron ore mining
		MOER No. 34/2009	Standard of waste water for bauxite ore industry
		MOER No. 12/2008	Standard of waste water for seaweeds processing

No	EHS Guideline	Indonesia Standards	Content
		MOER No. 13/2008	Standard of waste water for coconut processing
		MOER No. 14/2008	Standard of waste water for meat processing
		MOER No. 15/2008	Standard of waste water for Soya processing
		MOER No. 5/2007	Standard of waste water for fruit and vegetables processing
		MOER No. 6/2007	Standard of waste water for fishery
		MOER No. 8/2007	Standard of waste water for upstream petrochemical industry
		MOER No. 9/2007	Standard of waste water for rayon industry
		MOER No. 10/2007	Standard of waste water for purified terephthalic acid and poly ethylene terephthalate industry
		MOER No. 02/2006	Standard of waste water for livestock slaughter house
		MOER No. 04/2006	Standard of waste water for tin mining
		MOER No. 09/2006	Standard of waste water for nickel mining
		MOER No. 10/2006	Standard of waste water for poly Vinyl Chloride industry
		MOED No. 122/2004	Change on MOED No: 51 of 1995 regarding standard of liquid waste for fertilize industry
		MOED No. 202/2004	Standard of waste water for gold and/or copper mining
		MOED No. 112/2003	Standard of waste water for domestic activity
		MOED No. 113/2003	Standard of waste water for coal mining
		MOED No. 3/1998	Standard of waste water for industry area
		MOED No. 51/1995	Standard of liquid waste for industry
		MOED No. 52/1995	Standard of liquid waste for hotel
		MOED No. 58/1995	Standard of liquid waste for hospital
4	Hazardous material	Law No. 9/2008	Use of Chemicals and Prohibition of Use Chemicals as Chemical Weapons

No	EHS Guideline	Indonesia Standards	Content
		Government Regulation No. 74/2001	Management of Hazardous & Toxic
		MOHR No. 472/1996	Hazardous material for health
		MOER No. 3/2008	Symbol and Label of hazardous and toxic
		MOIR No. 33/2007	Prohibition for Ozone substance producing and materials of Ozone substance
		MOITD No. 254/2000	Procedure of import and distribution of hazardous material
		MOITD No. 110/1998	Prohibition for Ozone substance trading and producing and trading new material using BPLO (ODS)
		MOMPD No. 187/1999	Controlling of hazardous chemical material in the working area
		Circulation Letter of Man Power Minister No. 1/1997	Standard for Chemical factor in the air of working area
		Dir.Gen. of Land Transportation Decision No. 725/2004	Operation of hazardous & toxic transportation on the road
5	Hazardous waste	Government Regulation No. 18/1999	Management of hazardous & toxic waste
		Government Regulation No. 85/1999	Changed on GR No: 18 of 1999 regarding Management of hazardous & toxic waste
		MOER No. 18/2009	Permitting procedure of hazardous & toxic waste management
		MOER No. 5/2009	Waste management in the port
		MOER No. 30/2009	Permitting Procedure of hazardous & toxic by local government
		MOER No. 33/2009	Procedure of land recovery contaminated by hazardous & toxic waste
		MOER No. 2/2008	Utilization of hazardous & toxic waste
		MOED No. 520/2003	Prohibition for import of hazardous & toxic waste
		MOMRED No. 1693/2001	Implementation of lubricants fabrication & ex-lubricants processing and also determination of lubricants quality

No	EHS Guideline	Indonesia Standards	Content
		MOITD No. 372/2001	Provision of business permit giving for lubricants fabrication industry & ex-lubricants processing
		Head of Bapedal Decision No. 2/1998	Procedure of supervision for hazardous & toxic management in the local
		Head of Bapedal Decision No. 4/1998	Determination of hazardous & toxic waste priority
		Head of Bapedal Decision No. 255/1996	Procedure and requirements for storage & collecting of ex-lubricants
		Head of Bapedal Decision No. 1/ 1995	Procedure and technical requirements for storage & collecting of hazardous & toxic waste
		Head of Bapedal Decision No. 2/1995	Manifest of hazardous & toxic waste
		Head of Bapedal Decision No. 3/1995	Technical requirement for hazardous & toxic waste management
		Head of Bapedal Decision No. 4/1995	Procedure of processing product requirement , requirement of ex-processing location and hazardous & toxic waste stockpile processing ex-stockpile location
		Head of Bapedal Decision No. 5/1995	Symbol and Label of hazardous & toxic waste
		Circulation Letter of Head of Bapedal No. 8/SE/02/1997	Submission of ex-lubricants
		Head of Bapeten Decision No. 3/1999	Safety provisions for Radioactive Waste Management
6	Noise	MOED No. 48/1996	Standard of noise
		MOER No. 7/2009	Threshold of noise for new type vehicle
7	Contaminated land	MOED No. 128/2003	Processing technical requirement of Procedure for petroleum waste and petroleum-contaminated land

### **Recommendation**

219. Socialization of Government Regulation No. 70/2009 regarding Energy conservation, especially regarding obligation of energy efficiency conduction in the process of production as well as to its guideline formulation.

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220. To use International standard (Environmental Health & Safety Guideline by World Bank Group) for a view aspects is not issued in Indonesia regulation yet, for example : the standard for sediment.

Table 2-14: Comparison between Requirements of Donor/Lenders and Indonesia Regulations on Content of Pollution Prevention

ADB SPS 2009 : Environmental Safeguards : Policy Principle : 9	Indonesian Regulations	Gap	Equivalency	Recommendation
<p>ADB will follow the standards and approaches laid out in the World Bank's Pollution Prevention and Abatement Handbook</p> <p>The borrower/client will apply pollution prevention and control technologies and practices consistent with international good practice that is implemented in design, construction and operation phases, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines.</p> <ul style="list-style-type: none"> <li>- <b>Pollution prevention, resources preservation and energy efficiency</b>, the borrower/client will avoid, or where avoidance is impossible, will minimize or control the intensity or load of pollutant emission and discharge. In addition the borrower/client will examine and incorporate in its operations resource conservation and energy efficiency measures consistent with the principles of cleaner production.</li> <li>- <b>Waste</b>, the borrower/client will avoid, or where avoidance is not possible, will minimize or control the generation of hazardous and non-hazardous wastes and the release of hazardous materials resulting from project activities.</li> <li>- <b>Limbah</b>: meminimalkan atau mengendalikan timbulnya limbah berbahaya dan tidak berbahaya dan pelepasan bahan berbahaya yang dihasilkan dari kegiatan proyek.</li> </ul>	<p>Pollution prevention and resources efficiency uses the Law No. 32/2009 on Environmental Protection and Management (EPM) and its derivatives scattered in some sectors such as agriculture, industry and health.</p> <p>One of instruments for pollution prevention is environmental quality standard and damage criteria stated in the Law No. 32/2009. Other measures for pollution prevention are prevention and recovery.</p> <p>Implementation of energy efficiency is reflected into the Law No. 30/2007 on energy; Governmental Regulation No. 70/2009 on energy conservation; Presidential Instruction No. 3/2011 on energy and water saving; and regulation of Ministry of Energy and Mineral Resources No. 3/2012 on saving of power utilization.</p> <p>Article 12 of the Governmental Regulation No. 70/2009 mentions that annual use of energy is &gt; 6000 STM (Setara Ton Minyak/equivalent with tons of oil) has to implement energy conservation through energy management.</p> <p>Pollution prevention is also reflected into clean production regulated in MOER No. 31/2009, Article 1, Para. 4, regarding guidance and supervision of environmental management system; ecolabel; cleaner production and environmental based</p>	<p>The energy conservation has not been explicitly stated in Ministry of Environmental Regulation No. 16/2012 for it is mentioned in Government Regulation No. 70/2009 regarding Energy Conservation.</p> <p>In Indonesia, some regulations have been issued for pollution prevention and energy conservation, however, it still need more additional regulations for other environmental quality standards like as sediment quality, Indonesia uses abroad quality standard for sediment.</p>	<p>Partly equivalent</p>	<p>Need socialization of Governmental Regulation No. 70/2009 on energy conservation, especially for energy saving in cleaner production and need to provide the technical guideline.</p> <p>Indonesia will use international standards for some sectors/environmental components that do not have yet quality standard regulation.</p>

ADB SPS 2009 : Environmental Safeguards : Policy Principle : 9	Indonesian Regulations	Gap	Equivalency	Recommendation
<p>- <b>Pesticide use and management</b>, the environmental assessment will ascertain that any pest and/or vector management activities related to the project are based on integrated pest management approaches that entail coordinated use of pest and environmental information. The health and environmental risks associated with pest management should be minimized with support, as needed, to institutional capacity development, to help regulate and monitor the distribution and use of pesticides and enhance the application of integrated pest management. The borrower/client will not use products that fall in World Health Organization Recommended Classification of Pesticides by Hazard Classes Ia (extremely hazardous) and Ib (highly hazardous).</p> <p><b>Greenhouse gas emission</b>, the borrower/client will, promote the reduction of project-related anthropogenic greenhouse gas emissions in a manner appropriate to the nature and scale of project operations and impacts; quantify direct emissions from the facilities within the physical project boundary and indirect emission associated with the off-site production of power used by the project during the development or operation of projects that are expected to or currently produce significant quantities of greenhouse gases; conduct quantification and monitoring of greenhouse gas emissions annually in accordance with internationally recognized</p>	<p>technology in regions. The concept of cleaner production is pollution prevention; minimize waste; recycle; control of pollution, disposal and treatment, as well as remediation.</p> <ul style="list-style-type: none"> <li>- <b>Pollution prevention and waste</b>, the Law No. 32/2009, Article 20 has mentioned that determination of environmental pollution is measured through environmental quality standard, where quality standard for water, effluent water, sea water, ambient air, emission and others have been specified into governmental regulations and ministerial regulations including regulation for hazardous waste.</li> <li>- <b>Hazardous materials</b>, has been regulated into some regulations regarding hazardous materials</li> <li>- <b>Pesticide use and management</b>, the pesticide is classified into hazardous material. It need consideration in the use of pesticide, the regulation that set pesticide has been issued.</li> <li>- <b>Greenhouse gas emission</b>, the Law No. 32/2009 has regulated commitment to specify and implement policy on global climate changes, and through Clean Development Mechanism (CDM), National Appropriate Mitigation Action (NAMA's) as implemented in National Action Plan on Greenhouse Gas Action Plan that have</li> </ul>			

<b>ADB SPS 2009 : Environmental Safeguards : Policy Principle : 9</b>	<b>Indonesian Regulations</b>	<b>Gap</b>	<b>Equivalency</b>	<b>Recommendation</b>
methodologies; evaluate technically and financially feasible and cost-effective options to reduce or offset project-related greenhouse gas emissions during project design and operation, and pursue appropriate options	<p>been mentioned in the Presidential Regulation No. 61/2011 and 71/2011 about implementation of greenhouse gas inventory. In responding the Presidential Regulation No. 71/2011, Ministry of Environment and Forestry has issued MOER No.15/2013 on measurement, reporting, and verification of climate change mitigation action, which details procedure for report assessment and verification of climate change prevention measures.</p> <p>- Requirement of greenhouse gas effect assessment is not clearly mentioned in the MOER No. 16/2012, nevertheless the GOI has committed to implement prevention acts toward climate change.</p>			

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### 2.3.10. ADB Environmental Safeguards Policy Principle 10 - Health & Safety

#### **ADB**

- **Occupational Health and Safety:** the borrower/client will provide workers with a safe and healthy working environment, taking into account risks inherent to the particular sector and specific classes of hazards in the borrower's/client's work areas, including physical, chemical, biological, and radiological hazards; take steps to prevent accidents, injury, and disease arising from, associated with, or occurring during the course of work; apply preventive and protective measures consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines. In the regulation have been stipulated like as general facility design and operation, communication and training, physical hazard, chemical hazard, biological hazard, radiological hazards, Personal Protective Equipment (PPE), special hazards and monitoring
- **Community Health:** the borrower/client will, identify and assess the risks to, and potential impacts on, the safety of affected communities during the design, construction, operation, and decommission in of the project, and will establish preventive measures and plans to address them in a manner commensurate with the identified risks and impacts. These measures will favor the prevention or avoidance of risks and impacts over their minimization and reduction; inform affected communities of significant potential hazards in a culturally appropriate manner and be prepared to respond to accidental and emergency situations. Several items need to pay attention for the EHS Guideline for example: water quality and availability, structural safety of project infrastructure, life and fire safety (L&FS), traffic safety, transport of hazardous materials, disease prevention, emergency preparedness and response.

#### **World Bank**

- **Community Health and Safety:** The borrowers/client will evaluate the risks and impacts to the health and safety of the Affected Communities during the project life-cycle and will establish preventive and control measures consistent with good international industry practice (GIIP),<sup>1</sup> such as in the World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines) or other internationally recognized sources; will identify risks and impacts and propose mitigation measures that are commensurate with their nature and magnitude; including favor the avoidance of risks and impacts over minimization.

**Infrastructure and Equipment Design and Safety:** The borrower/client will design, construct, operate, and decommission the structural elements or components of the project in accordance with GIIP, taking into consideration safety risks to third parties or Affected Communities. When new buildings and structures will be accessed by members of the public, the client will consider incremental risks of the public's potential exposure to operational accidents and/or natural hazards and be consistent with the principles of universal access. Structural elements will be designed and constructed by competent professionals, and certified or approved by competent authorities or professionals. When structural elements or components, such as dams, tailings

dams, or ash ponds are situated in high-risk locations, and their failure or malfunction may threaten the safety of communities, the client will engage one or more external experts with relevant and recognized experience in similar projects, separate from those responsible for the design and construction, to conduct a review as early as possible in project development and throughout the stages of project design, construction, operation, and decommissioning. The substance of the dam described in Government Regulation No. 27/2012. For projects that operate moving equipment on public roads and other forms of infrastructure, the client will seek to avoid the occurrence of incidents and injuries to members of the public associated with the operation of such equipment.

- **Community Exposure to Disease:** The borrower/client will avoid or minimize the potential for community exposure to water-borne, water-based, water-related, and vector-borne diseases, and communicable diseases that could result from project activities, taking into consideration differentiated exposure to and higher sensitivity of vulnerable groups. Where specific diseases are endemic in communities in the project area of influence, the client is encouraged to explore opportunities during the project life-cycle to improve environmental conditions that could help minimize their incidence.

### ***JICA***

221. The impacts to be assessed with regard to the environmental and social considerations include impacts on human health and safety, as well as on the natural environment, that are transmitted through air, water, soil, waste, accidents, water usage, climate change, ecosystems, fauna and flora, including trans boundary or global scale impacts.

### ***Indonesia***

222. The occupational health and safety pays more attention to the health and safety of workers. The law No. 13/2003 regarding Manpower states in article 86 that Indonesian regulation ensures every worker has the right to protection, safety and health to achieve optimal work productivity. Article 89 of Law No. 13/2003 states that every company has the obligation to practice health and safety management and to integrate them into the company management system. Implementation of health and safety system had been issued by Government Regulation No. 50/2012 regarding Practiced of Health and Safety Management System. The sub-ordinate regulations for work safety is Ministry of Man power Regulation No. PER.05/MEN/1996 regarding Health and Safety Management System; Ministry of Public Work Regulation No. 9/2008 regarding Guidelines for Work Health and Safety Management for Public Works Construction sector; Minister of Settlement and Regional Infrastructure Decree No. 384/KPTS/M/2004 regarding Technical Guidelines for Work Health and Safety Management at Dam Construction Site.

223. Regulations related to the community health aspect in AMDAL documents is regulated in Decree of Head of Bapedal No. 124/1997 regarding Guidelines for Community Health Aspect in AMDAL Preparation. Also Decision of Minister of Health No. 876/2001 regarding Technical Guidelines for Environmental Health Impact Analysis (EHIA) at Attachment 1 explains Guideline EHIA in AMDAL. Law 36/2009 regarding Health explains

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Environmental Health at Articles 162 and 163 in Chapter XI. It also explains safety health at Articles 164, 165, 166 Chapter XII.

224. The community health study based on the above mentioned regulation shall contain the following:

- Pollutant related issue that should be noticed such as the pollutant spread in environmental media (water, air, land & food), exposure tracks that may occur in the future, data and information of toxicology, epidemiology, environmental health and the international experiences and best practices for similar cases;
- Vector-borne disease related issues such as changes in land that caused inundation, vegetation changes that support or avoid the growth of vector, data and information study of malarlometri and the international experiences and best practices for similar cases;
- Community's behavior such as habits on the use of water, repellent or pesticide use, sanitation, food management, health, etc.

225. In general, the study is focused on the change of community's health level in the presence of the project. However the health factor transferred by the workers from outside area to the community including the potency of Sexually Transmittal Infection of HIV has never been assessed.

### ***Comparison and Gap Analysis***

226. Regulations on manpower have stipulated from laws up to minister regulation were issued by Ministry of Man Power and Ministry of Public Work. It shows that the issue of health and safety is very important. Work Health and Safety matter yet is not an impact that shall be analyzed deeper and included in RKL-RPL since it already has its own SOP. In the implementation stage of Work Health and Safety, it is often combined with environmental issues. However, international standard such as EHS Group of World Bank for geothermal and toll road is still required since it is unavailable in Indonesian regulations.

227. Analysis of health community matter is AMDAL analysis according to MOER No.16/2012 Appendix II (AMDAL Document preparation) is limited to community health level and has not mentioned for working safety and health clearly for there is never conducted any in-depth analysis on this matter. There are two (2) regulations as reference in analysis of community health aspect, such as: Decree of Head of Bapedal No. 124/1997 regarding Guidelines for Community Health Aspect in AMDAL Preparation and Decree of Minister of Health No. 876/2001 regarding Technical Guidelines for Environmental Health Impact Analysis (EHIA). Yet those regulations have not been completely being reference in analysis of community health aspect.

### ***Recommendation***

228. The Work Health and Safety issue is sufficient in Indonesian laws and regulations. However, it is still required to refer to the international standards in case it is unavailable in the Work Health and Safety management in Indonesia.

229. Refer to Decision of Bapedal Head No. 124/1997 to analyze community health impact and Decree of Minister of Health No.876/2001 regarding Technical Guidelines for Environmental Health Impact Analysis (EHIA) beside MOER No. 16/2012 regarding Environmental document preparation.

230. To add analyze possibility of community's health problem sources from outside community or workers including STI of HIV.

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Table 2-15: Comparison between Requirements of Donor/Lenders and Indonesia Regulations on Content of Health & Safety

ADB SPS 2009 : Environmental Safeguards : Policy Principle : 10	Indonesian Regulations	Gap	Equivalency	Recommendation
<ul style="list-style-type: none"> <li>- <b>Occupational Health and Safety:</b> the borrower/client will provide workers with a safe and healthy working environment; and apply preventive and protective measures consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines.</li> <li>- <b>Community health,</b> the borrower/client will, identify and assess the risks to, and potential impacts on, the safety of affected communities during the design, construction, operation, and decommissioning of the project, and will establish preventive measures and plans to address them in a manner commensurate with the identified risks and impacts.</li> </ul>	<p>Some regulations on occupational health and safety are more concerning on health and safety of workers, such as the Law No. 13/2003 about manpower (Article 89 and 87 in Para. 1); Governmental Regulation No. 50/2012 on application of occupational safety and health management system; Regulation of Minister of Manpower No. 05/MEN/1996 regarding safety and health management system; Regulation of Minister of Public Works regarding guideline of occupational safety and health management system for construction of public works; and Regulation of Minister of Regional Settlement and Infrastructures No. 384/KPTS/M/2004 regarding technical guideline of occupational health and safety for dam construction.</p> <p>Public health aspect in AMDAL document is regulated in Decree Letter of Head of Bappedal No.124/1997 on guideline of public health aspect analysis in preparation of AMDAL document. Also, Decree of Minister of Health No. 876/2001 regarding technical guideline for environmental health impact analysis on Appendix 1 which explains guideline of analysis of environmental health effect. The Law No. 36/2009 on health, has</p>	<p>Regulations on manpower are issued from law to ministerial regulations such as minister of public works. It shows that occupational health and safety is essential. However, occupational health and safety issues are not deeply considered yet in analysis and RKL-RPL document due to it has its own SOP. In actual, occupational health and safety is often incorporated in environmental issues.</p> <p>Public health analysis in AMDAL document referred in MOER No. 16/2012, Appendix II (preparation of AMDAL document) is limited on public health levels.</p> <p>Two regulation references in public health aspect analysis are Decree of Head of Bappedal No. 124/1997 on guideline of public health aspect analysis in AMDAL document preparation, and Decree of Minister of Health No. 876/2001 on technical guideline of environmental health impact analysis.</p>	<p>Partly equivalent</p>	<ul style="list-style-type: none"> <li>- Need international standard references for occupational health and safety if those are not regulated in Indonesian regulations</li> <li>- In addition MOER No. 16/2012, the followings two regulations need to be recognized as references on public health impact analysis in preparation of AMDAL document such as Decree of Head of Bappedal No. 124/1997 and Decree of Minister of Health No. 876/2001</li> <li>- Add analysis on effect of public health from outside workers including STI and HIV.</li> </ul>

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<b>ADB SPS 2009 : Environmental Safeguards : Policy Principle : 10</b>	<b>Indonesian Regulations</b>	<b>Gap</b>	<b>Equivalency</b>	<b>Recommendation</b>
	<p>explained environmental health in Article 162 and 163 in chapter XI, in addition Article 164-166 chapter XII explains on occupational safety and health.</p> <p>In general, health study has been focused on change of public health levels toward existence of project. However, health factor which is transmitted by workers from outside to community including potential of infection of HIV is not analyzed.</p>			

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### **2.3.11. ADB Environmental Safeguards Policy Principle 11 - Physical Cultural Resources (PCR)**

#### **ADB**

231. ADB requires the borrower/client to avoid significant damage to physical cultural resources. If a project may affect physical cultural resources, the borrower/client will consult with affected communities who use, or have used them within living memory, for long-standing cultural proposes to identify cultural resources of importance and to incorporate the views of the affected communities on such resources into the borrower's/client's decision making process. Consultation will also involve relevant national or local regulatory agencies that are entrusted with protecting physical cultural resources. The findings are disclosed as part of, and in the same manner as, the environmental assessment report, except when such disclosure would compromise or jeopardize the safety or integrity of the physical cultural resources.

232. When the project is likely to have adverse impacts on physical cultural resources, the borrower/client is required to identify appropriate measures for avoiding or mitigating these impacts as part of the environmental planning process. These measures may range from avoidance to full site protection to selective mitigation, including salvage and documentation, in cases where a portion or all of the physical cultural resources may be lost.

233. When the proposed location of a project is in areas where physical cultural resources are expected to be found as determined during the environmental assessment process, chance finds procedures will be included in the EMP. Chance finds shall not be disturbed until an assessment by a competent specialist is made and actions consistent with these requirements are identified.

234. The project will not remove any physical cultural resources unless the following conditions are met:

- (i) No alternatives to removal are available;
- (ii) The overall benefits of the project substantially outweigh the anticipated cultural heritage loss from removal;
- (iii) Any removal is conducted in accordance with relevant provisions of national and/or local laws, regulations, and protected area management plans and national obligations under international laws, and employs the best available techniques.

#### **World Bank**

235. OP 4.11-Physical Cultural Resources specified that the borrower/client has to avoid or mitigate adverse impacts on physical cultural resources from development projects that shall be financed by the Bank. The impacts on physical cultural resources resulting from project activities, including mitigation measures may not contravene either the borrower's national legislation, or its obligations under relevant international environmental treaties and agreements.

236. The borrower shall address impacts on physical cultural resources in projects proposed for Bank financing, as an integral part of the environmental assessment process. When the project is likely to have adverse impacts on physical cultural resources, the borrower shall identify the appropriate measures for avoiding or mitigating the impacts as part of Environmental

Assessment (EA) process. The measures may range from full site protection or all of the physical cultural resources may be lost.

237. As an integral part of the EA process, the borrower shall develop a physical cultural resources management plan that includes measures for avoiding or mitigating any adverse impacts on the physical cultural resources, provisions for managing chance finds, any necessary measures for strengthening institutional capacity, and a monitoring system to track the progress of the activities. The physical cultural management plan shall be consistent with the country's overall policy framework and national legislation and takes into account institutional capabilities with regard to physical cultural resources.

238. The consultative process for the physical cultural resources component normally includes relevant-project-affected groups, concerned government authorities, and relevant NGOs in documenting the presence and significance of physical cultural resources, assessing potential impacts and exploring avoidance and mitigation options.

### **JICA**

239. JICA's Guidelines for Environmental and Social Considerations 2010 did not have specific clauses on the cultural heritage. However, it includes that area with unique archaeological, historical and cultural value as the sensitive areas. And the cultural heritage item is included in the social impacts on the scope of impacts to be assessed.

### **Indonesia**

240. In Indonesia, the definition, criteria, procedures and mechanism for cultural heritage preservation is regulated in Law No. 11/2010 which is being amended from the Law No. 5/1992. However, in the framework of AMDAL, the heritage cultural component is included in the socio-economic-cultural component. Decree of Head of Bapedal No. 299/1996 regarding Technical Guidelines for Social Assessment in AMDAL Preparation already specified the necessity to analyze the cultural resources in the AMDAL Study, which consists of physical cultural resources and cultural preservation.

### ***Comparison and Gap Analysis***

241. The main regulation of reference used in preparing environment document is MOER No. 16/2012 regarding Preparation of Environmental Documents. However, there are some regulations that can be used as references to compile AMDAL document study, i.e.: Laws No. 11/2010 regarding Culture Heritage; Decision of Bapedal Head No. 299/1996 regarding Technical Guidelines for Social Assessment in AMDAL Preparation in the assessment of PCR.

242. However, the donor requires more detailed information for the PCR existence at the local, regional, and international level around the project location. Therefore, in the management it shall be stated 'chance find' to identify the location and area scope of PCR.

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### **Recommendations**

243. Analysis for cultural heritage or cultural structures relic in the preparation of AMDAL document shall refer to Decree of Head of *Badan Pengendalian Dampak Lingkungan/Bapedal* (Environmental Impact Management Agency) No. 299/1996 regarding Technical Guidelines for Social Cultural Aspects Analysis and Law No.11/2010 as well as MOER No. 16/2012.

244. The existence of “chance finds” shall include as hypothetic significant impact for it might be analyzed more and into social approach of RKL-RPL.

Table 2-16: Comparison between Requirements of Donor/Lenders and Indonesia Regulations on Content of Physical Cultural Resources

<b>ADB SPS 2009 : Environmental Safeguards : Policy Principle : 11</b>	<b>Indonesian Regulations</b>	<b>Gap</b>	<b>Equivalency</b>	<b>Recommendation</b>
<p>ADB requires the borrower/client:</p> <ul style="list-style-type: none"> <li>- to avoid significant damage to physical cultural resources;</li> <li>- consult with affected communities who use, or have used them within living memory, for long-standing cultural proposes</li> <li>- Consultation will also involve relevant national or local regulatory agencies that are entrusted with protecting physical cultural resources.</li> </ul> <p>When the project is likely to have adverse impacts on physical cultural resources, the borrower/client is required to identify appropriate measures for avoiding or mitigating these impacts as part of the environmental planning process. These measures may range from avoidance to full site protection to selective mitigation, including salvage and documentation, in cases where a portion or all of the physical cultural resources may be lost.</p> <p>“Chance finds” procedures will be included in the EMP. Chance finds shall not be disturbed until an assessment by a competent specialist is made and actions consistent with these requirements are identified.</p>	<ul style="list-style-type: none"> <li>- The Law No. 11/2010 and its amendment the Law No. 5/1992 sets definition, criteria, procedure, and mechanism of physical cultural resources.</li> <li>- MOER No. 16/2012 does not explicitly mention on analysis of physical cultural resources, though another regulation Decree Letter of Head of Bappedal No. 299/1996 regulates detail of physical cultural resources analysis through technical guideline of social aspect analysis in AMDAL document preparation.</li> </ul>	<p>Main regulation in AMDAL document preparation is MOER No. 16/2012. However, some regulations can be used as references such as the Law No. 11/2010 on physical cultural resources; and Decree Letter of Head of Bappedal No. 299/1996 on technical guideline of social aspect analysis in AMDAL document preparation.</p> <p>However, other Donors asks detail information on existence of physical cultural resources which local, national, international recognized in surrounding proposed project location.</p> <p>Donor request to detail information of physical cultural resources at the local, national and international around the project . And in the management shall be stated as “chance finds” for determination of location and scope of physical cultural resources.</p> <p>There is prohibition for displacement unless the requirements have been specified.</p>	<p>Partly equivalent</p>	<p>The Law No. 11/2010, MOER No. 16/2012 and Decree Letter of Head of Bappedal No. 299/1996, need to be incorporated in analysis of physical cultural resources</p> <p>Existence of “chance finds” shall be considered to be hypothetical significant impact that will be further assessed in RKL document.</p>

<b>ADB SPS 2009 : Environmental Safeguards : Policy Principle : 11</b>	<b>Indonesian Regulations</b>	<b>Gap</b>	<b>Equivalency</b>	<b>Recommendation</b>
<p>The project will not remove any physical cultural resources unless the following conditions are met:</p> <ul style="list-style-type: none"> <li>(i) No alternatives to removal are available;</li> <li>(ii) The overall benefits of the project substantially outweigh the anticipated cultural heritage loss from removal;</li> <li>(iii) Any removal is conducted in accordance with relevant provisions of national and/or local laws, regulations, and protected area management plans and national obligations under international laws, and employs the best available techniques.</li> </ul>				

### **2.3.12. Preparation of Safeguards Documents**

#### **ADB/World Bank/JICA**

245. Normally, the borrower is responsible for the selection, engagement and supervision of loan-financed consultants, and donors are responsible for the selection, engagement and supervision of TA grant-financed consultants.

246. ADB has issued Guidelines on The Use of Consultants by Asian Development Bank and Its Borrowers in March 2013, to define policies and procedures of ADB for selecting, contracting, and monitoring consultants required for loan and technical assistance (TA) projects financed in whole or in part by ADB. This guideline basically regulates general considerations, applicability, conflict of interest, eligibility and others that relates to the ADB policies, procedures for selecting the consultant, contracting methods, important contract provisions for loans and monitoring and evaluating performance of the consultants. Terms of consultants in this guidelines is not merely for EIA preparation consultant, but it includes a wide variety of private and public entities, including international and national consulting firms, engineering firms, construction firms, management firms, procurement agents, NGO, etc. that ADB or its borrowers use as consultants to help in a wide range of activities.

247. There are six main considerations on the ADB 's policy consultant selection process: a) need for high-quality services; b) need for economy and efficiency; c) need to give all qualified consultants an opportunity to compete in providing the services financed by ADB; d) ADB's interest in encouraging the development and use of national consultants from developing member countries (DMCs); e) need for transparency in the selection process; and f) need for increasing focus on anticorruption and observance of ethics.

248. Tasks of consultants especially for preparing the EIA documents are defined in the terms of reference (TOR) which shall be prepared in accordance to the scope of the proposed business/activity plan or consistent with the needs of the proposed business/activity plan by the borrowers or ADB. Before the process of recruitment of a consulting firm starts, the objective and scope of the proposed work, and the functions and duties to be assigned to the consultants should be clearly and adequately defined in TOR. TOR shall define clearly on the objective, scope of the work including duties of consultant, required staffing and qualification, schedule, reporting and output. In this regard, ADB shall ensure that the procedures to be used will result in the selection of the necessary professional qualification.

249. Selection of consulting firms to carry out EIA/IEE funded by ADB shall be done by either Quality and Cost-Based Selection (QCBS) or Quality-Based Selection (QBS). QCBS is based on the quality of the technical proposal and the cost of the services to be provided while in QBS, only the quality of the technical proposals is evaluated. QCBS is appropriate when: i) the scope of work can be precisely defined; ii) the TOR are well specified and clear; and iii) ADB or the borrower and the consultants can estimate with reasonable precision the personnel time as well as the other inputs required of the consultants. On the other hand, QBS is appropriate when: i) assignments are complex or highly specialized and therefore it is difficult to define precise TOR; (ii) the downstream impact is so large that the quality of the services is of overriding importance for the outcome of the project; and (iii) assignments can be carried out in substantially different ways and thus comparison of financial proposals maybe difficult. In most cases, the TOR for EIA/IEE can be defined

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and the cost and personnel time can be estimated in advance, so QCBS is used for selecting consulting firms.

250. The borrowers shall send RFP to consultants on the shortlist by giving first consideration to those firms expressing interest that possess the relevant qualifications. Requirements for the shortlist and selection evaluation method further explained in the Guideline, and shall not more in detail explained in this section. When consultants receive the Request for Proposal (RFP) and if they can meet the requirements of the TOR and the commercial and contractual conditions, they should make the arrangement necessary to prepare the good and fully responsive proposal (conduct site visit, collecting supporting data and documentation and setting up the organization team) requested in RFP. It is essential to ensure accuracy and compliance of the curriculum vitae (CV) of experts submitted with the proposals.

251. The RFP shall specify selection criteria relevant to the activity, for example, experience in similar assignments or network. In this case, it is expected that the composition of the EIA consultant team members are experiencing or capable to do such proposed work since the requirements is made based on the nature of the required tasks. For example, a project with potential impact on biodiversity may require suitably qualified professionals. TOR must clearly articulate such requirements. Therefore, the capacity of borrower to prepare a good TOR will be critical for successful EIA/IEE.

## **Indonesia**

252. The preparation of AMDAL document in Indonesia involves the proponent as the responsible party of a business and/or activity which will be implemented, either individually or government institution and competent AMDAL compiler.

253. In AMDAL arrangement the proponent can assign another party either to an individual or compiler who is incorporated in Arrangement Service Agency (LPJP). The requirement of AMDAL compiler is mandatory to have AMDAL compiler competency certificate. Meanwhile to obtain that certificate AMDAL compiler must fulfill the criteria below: having knowledge in AMDAL arrangement; have the ability to do scoping, estimation and impact evaluation, decision making; ability to arrange management and environment observation plan and to pass the competency test.

254. For LPJP who will be involved in AMDAL arrangement, the government issuance the MOER No. 7/2010, Article 3, for example:

- Consultant should be registered and certificated;
- The consultant firm should:
  - o Be incorporated;
  - o Have at least 2 (two) full-time AMDAL document organizer employees who have certification as team leader of AMDAL document organizer;
  - o Have work contract with part-time AMDAL document organizer employees who have certification of AMDAL document organizer and all of involved employee should be legally responsible, including in impartiality;
  - o Has quality management system;

- To do internal quality insurance about the AMDAL document preparation, including ensuring the principle of impartiality and/or avoid conflict of interest.

255. To obtain certificate of competency, the AMDAL compiler candidate must follow AMDAL training and education held by AMDAL Competency Training Institution (*Lembaga Pelatihan Kompetensi AMDAL/LPKA*) which has already been registered and accredited by the government. There is no regulation that manage the education level for the candidates to follow the AMDAL training and education, but is rather based on experiences and in its implementation, each LPKA requires the individual to have undergraduate qualifications.

256. The requirement for AMDAL compiler candidate who will follow the competency test has been arranged in MOER No. 7/2010, Appendix 1 for team member and Appendix 2 for Team Leader. Team members must at least have a diploma level without experience in AMDAL arrangement, while the Team Leader must be at least a first strata graduate with five times experience as a team member. The table below shows the criteria and requirements of AMDAL document compilers.

257. Qualification and requirements for an AMDAL consultant to participate in the competency test held by LSK-INTAKINDO still refer to the MOER No. 7/2010, although the Government Regulation No. 27/2012 Article 11 point (3) mentioned that any person who wants to participate in AMDAL certification test, shall attend the training for preparing AMDAL documents and must be stated as “passed” as shown in table below:

Table 2-17: Criteria and Requirements for Participating AMDAL Compiler Certification

No.	Qualification	Criteria or Requirements by LSK INTAKINDO <sup>1)</sup>	Requirements by Government Regulation No. 27/2012
1.	Team Leader (KTPA)	Education: a minimum of S1 or equivalent  Others : has participated in preparing or compiling at least 5 AMDAL documents.	Any person who wants to participate in AMDAL certification test shall attend the training for preparing AMDAL documents and must be certified as “passed”.
2.	Team member (ATPA)	Education: Minimum D3 or equivalent or has an education background in the environmental field or has attended a minimum of 3 SKS (semester credit system) on AMDAL.  Others: has been participated in AMDAL training (AMDAL B) or the equivalent (preparing EIA in foreign countries) or is experienced in compiling at least 5 AMDAL documents or has the experience in reviewing 15 AMDAL documents	

Source: Qualification and Requirement for Applying the AMDAL Compiler Competence Certification, LSK INTAKINDO

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258. Based on the above requirements, it is shown that a person who has an education background of minimum an S1 or equivalent and has the experience in compiling a minimum of 5 AMDAL documents may apply to participate in certification test either as member of AMDAL Team (ATPA) or as the Team Leader (KTPA). There is no specific staging (advance) system in Indonesian AMDAL certification system, such as a person who wants to apply certification of KTPA shall have ATPA certificate first as one of the requirements to apply KTPA. Any person who has the education background of minimum an S1 or equivalent and has been experienced in compiling at least 5 AMDAL documents may apply to obtain ATPA or KTPA certificates or both.

259. The validity of certificate of the AMDAL compiler extends for 3 (three) years, and shall be extended before termination. One of the requirements of LSK-INTAKINDO in maintaining the quality of the AMDAL Document, that the certified consultant has to submit log book and attached with 3 (three) softcopy of the best AMDAL Document that has been organized by a certified consultant to extend the validity of the his/her certificate and to attach copy of certificate as the evidence that she/he has participating seminar as the continuous professional development (CPD) LSK-INTAKINDO.

260. The consultant selection method differs depend on the source of the project. If it is government project, it requires competitive bidding (Quality and Cost Based Selection) process. If it is private funded project, the consultant for AMDAL preparation could be selected randomly as long as the above requirement is completed or as recommended by the environmental regional office.

261. As the authorized institution, the Government issuing regulation about institution that has the authorization in conducting competency test and provide competency certificate called as Competency Certification Institution, i.e. MOER No. 7/2010, Article 6.

### ***Comparison and Gap Analysis***

262. In terms of staging on selection of EIA consultant, the following figure shows comparison between staging of EIA document preparation procedure especially on selection of consultant under ADB Policies and Indonesian Regulation:

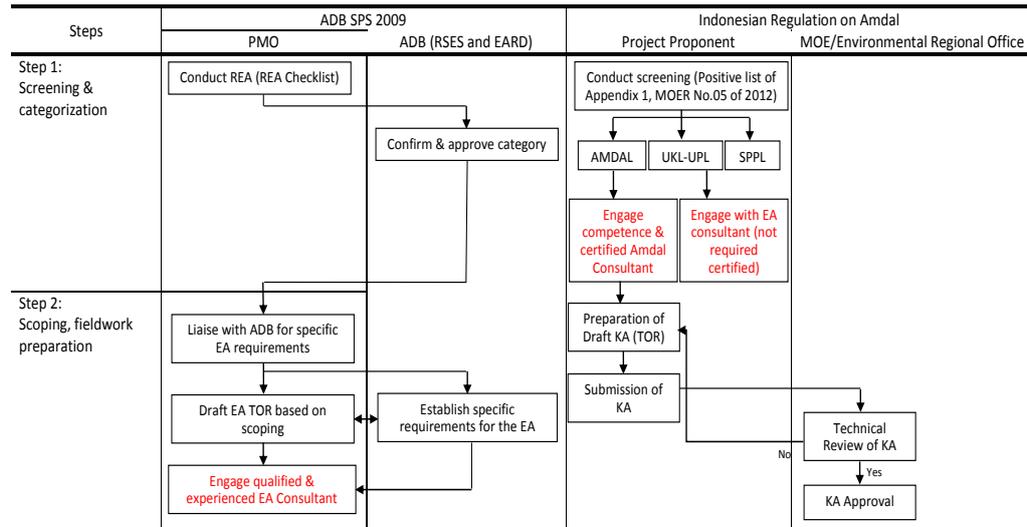


Figure 2-6: EIA document Preparation Procedures by ADB and Indonesian Regulatory Framework

263. From the figure above, it can be clearly seen that the selection of experienced EA consultant under ADB policies is made after the EIA TOR is made based on scoping, while in Indonesia selection of AMDAL Consultant is made before preparation of KA-ANDAL (EIA-TOR). One of the advantages of selecting the consultant after the TOR is the Project Proponent may select the appropriate EIA Consultant. The advantage of the selection of AMDAL Consultant before the preparation of KA is that the Consultant can support in preparing Draft KA -ANDAL (EIA-TOR).

264. Selecting an appropriate Consultant is of utmost importance in the implementation of the EIA Process and in the preparation of the EIA documents. Every project usually is unique and each has its own challenges. At the outset of many projects, it is difficult for a Project Proponent to prejudge the likely complexity of his/her project/problem or the variety of professional services that may be required to develop an appropriate solution. The success of any project depends upon obtaining the most appropriate expertise available in terms of skill, knowledge, past experience, managerial abilities and reputation. It is simple logic to recognize that if the Project Proponent may assign for Consultancy Services on the basis of appropriate quality will obtain a quality of service commensurate with their needs. Correct selection will have a major bearing on the quality, overall project cost, and success of the project, and hence on the overall value of the end result.

265. The advantage of selection of consultant through the competitive bidding is that during the selection stage, the competent professional Consultant will be able to offer the Project Proponent a team that has the education, training, practical experience, expertise and judgement to carry out the project in a cost effective and quality manner. Basically, Project Proponent can evaluate the professional competence of the team, its skills and qualification, by examining detailed resumes of key staff that are responsible for the provision of the specified services and their relevant experience on similar assignments, the list of similar projects carried out of the firm and the approach to and methodology for the proposed works. As for the private sector proposed business/activity plan, it is difficult to identify whether such kind of qualification

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have been accommodated or not, since the process of selection of AMDAL Consultant shall be independently done by the Project Proponent. Since the regulation did not specifically required that the AMDAL Consultant who shall be assigned for the proposed business/activity plan shall have professional competence (skill and qualification) and the Consultant relevant experience on similar assignment, then it cannot be strictly achieved.

266. In general, donors do not require consultants to have certificate to carry out EIA. However, since donor's activity shall be compliant with the law of the host country, AMDAL will have to be prepared by certified consultants/ consulting firms in Indonesia.

267. Even though AMDAL regulation seems to have a breakthrough in certification process, it actually makes the process more complicated and creates opening for misconduct. Based on experience, certification process possibly passing a less experienced consultant and eliminating a more experienced consultant. It is also needed to be considered that the Consultant who shall prepare AMDAL documents in a proposed business/activity plan shall have the appropriate expertise in term of skill, knowledge, past experience and managerial abilities relates to the proposed business/activity plan.

268. The advantages of applying current criteria as specified above may boost more applicants to participate in the certification tests which can increase the quantity of the certified AMDAL compiler. The disadvantages of this system is that any person who has been experienced in compiling at least 5 AMDAL documents, in any position or roles in compiling AMDAL documents, may apply to obtain both ATPA and KTPA certificates. There is no specific advancing system in the current certification system such as basic level (ATPA) as the first step to achieve more advance certificate or the highest level of the expertise such as KTPA. In this regard, there is no guarantee that a person who has obtained the KTPA certification may absolutely differentiate himself has the significant achievement and represents a high level of the expertise in AMDAL.

269. Compared to the requirements of Donors for selection of the Consultant of ADB on the type of consultant best suited for the assignment, World Bank requires the evaluation of the quality of the Consultant on the consultant's relevant experience for the assignment and the qualifications of the keys staff proposed. In Indonesia, the first requirement for the AMDAL Consultant is to have the certificate of KTPA and ATPA. A person who has AMDAL certificate may compile any kind of project. Although in the Government Project, the selection of the Consultants Team member is implemented through tender process which will also apply the quality and cost based selection in accordance to the requirements specified in TOR and the selection process refers to the Presidential Regulation No. 54/2010 on Procurements of Government Goods and Services, that has been amended by first amendment on Presidential Regulation No. 35/2011 and second amendment of Presidential Regulation No. 70/2012. In term of the process of selection of Consultant through tender, then determination on the TOR for the AMDAL Consultant is essential. In general field of works such as construction of civil works such as road or drainage works, perhaps there are lots of Civil Engineers who had obtained KTPA certificates. But, in some specific sectors, such as geothermal mining, etc., perhaps only few Engineers in related field have obtained such certificate. While, Team Leader's experiences and knowledge or qualifications as the key personnel on the related field or experienced in conducting similar works are very important to obtain the good quality of AMDAL documents. Therefore, for the improvement of the quality of the certified AMDAL Consultant, the Consultant

proposed the following system, especially to conduct specific course as the advance course on specific sector that enabling the AMDAL Consultant to upgrade his/her knowledge in several specific-sectors. However, the specific sectors that shall be selected for the advance course shall be further discussed.

270. Referring to the requirements of Government Regulation No. 27/2012 as mentioned above, it can be recommended to use the exam tests knowledge gained by completing AMDAL training as the first step and basic level requirements for participating AMDAL certification test. After taking AMDAL training, a candidate for AMDAL Consultant should be able or familiar to prepare the good AMDAL document as an assistant of AMDAL Consultant. In this regard, the roles of training institutions and curriculum of AMDAL training has to be able to suit the requirements on the good practicing or AMDAL Consultant.

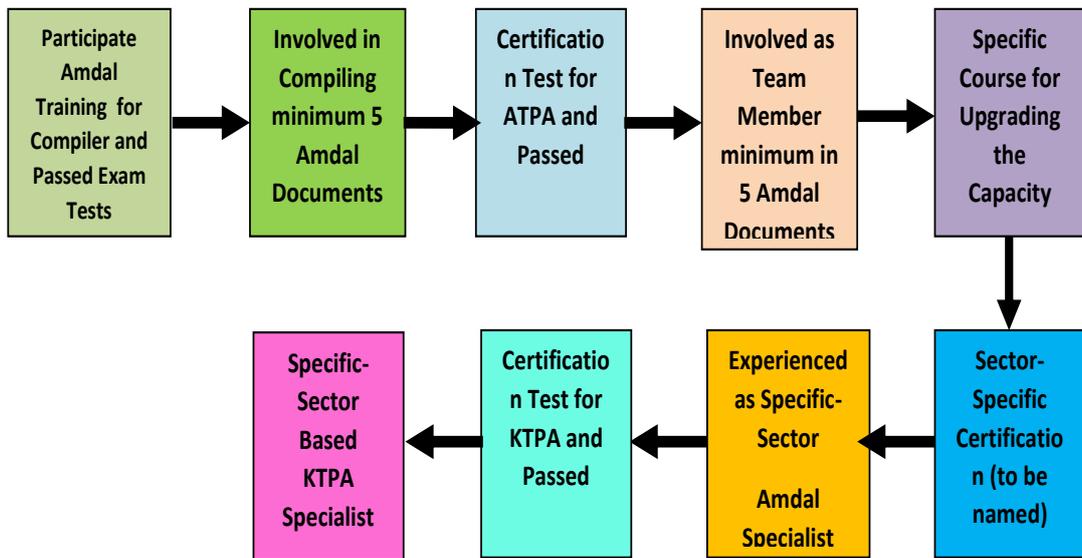


Figure 2-7: Recommended Advancing System for AMDAL Certification System

271. The Consultant proposed certification advancing system is as shown in the above figure. After obtaining the pass certificate from the Training Institution, the candidate can be involved in preparing or compiling AMDAL Documents at least as the Assistant of the AMDAL Team. After being experienced in compiling a minimum of 5 AMDAL documents, a candidate may apply to participate in obtaining the ATPA certificate. After passing the certification process for ATPA certification, he/she can be involved in AMDAL Consultant Team as the member. The ATPA certification is expected to build on the foundation of the AMDAL certification and expands the AMDAL Consultant's credentials as AMDAL Specialist. ATPA certification is the basic level of AMDAL Specialist. ATPA holders may participate in compiling AMDAL documents for any type of activities and after experiencing in at least 5 AMDAL documents preparation, it is expected that he/she can select his/her preferable specific sector expertise as his/her specialization. Then, the ATPA certificate holders are expected to take advance courses on AMDAL on specific field that he/she is interested in to be his/her specialization. The AMDAL Specialists perhaps are allowed to have specialization on maximum 5 expertise areas that relates to his/her education background. This course is recommended to be implemented by LPKA in association with professional associations in specific field to improve the knowledge of the ATPA holders on the specific field development in addition to his/her educational background.

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272. By following the above advancing certification system, it is expected that the KTPA certificate holders as the highest level of the AMDAL Specialist certification grade, shall be guaranteed to have the sector-specific knowledge that required to produce the good AMDAL documents, since the role of Team Leader is very important in the AMDAL Consultant Team.

***Recommendations***

273. Besides requirement for compiler for holding ATPA/KTPA (Member/Team Leader of AMDAL Compilation) competency certificate, it shall be added as well a specific qualification in the experience to perform similar work, at least for the Team Leader, for maintaining quality of AMDAL document.

Table 2-18: Comparison between Requirements of Donor/Lenders and Indonesia Regulations for Preparation of AMDAL Documents

ADB Framework	Indonesian Regulations	Gap	Equivalency	Recommendation
<ul style="list-style-type: none"> <li>• The borrower is responsible for the selection, engagement and supervision of loan-financed consultants, and donors are responsible for the selection, engagement and supervision of TA grant-financed consultants.</li> <li>• ADB exerts guidelines on The Use of Consultants (2003), in recruitment of consultants. This guideline basically regulates general considerations, applicability, conflict of interest, eligibility and others that relates to the ADB policies, procedures for selecting the consultant, contracting methods, important contract provisions for loans and monitoring and evaluating performance of the consultants. ADB uses the guideline in recruitment of consultants including consultant for EIA/IEE.</li> </ul>	<ul style="list-style-type: none"> <li>• Project proponent has to prepare AMDAL document for projects which have potentially significant impact listed into MOER 05/2012. The project proponent can appoint AMDAL consultant firm or individual AMDAL consultant in preparing of AMDAL document. The AMDAL consultant firm and individual consultant have to be registered in MOEF. The AMDAL compiling consultant shall have competency certificate as member of team (ATPA) and team leader of team (KTPA) in AMDAL document compiling.</li> <li>• In case of governmental projects, selection of AMDAL consultant firm exerts tender way by either quality and cost based selection in accordance with Presidential Regulation No. 54/2010, first amendment Presidential Regulation No. 34/2011, and second amendment Presidential Regulation No. 70/2012.</li> <li>• Recruitment of consultant to carry out AMDAL document preparation, is implemented on project screening phase, it is not after KA-ANDAL where the hipotetical significant impact and relevant experts with those impacts have been specified.</li> </ul>	<ul style="list-style-type: none"> <li>- Timing for recruitment AMDAL consultant is difference between Indonesia and other Donors. Recruitment of consultant to prepare AMDAL document is implemented before determination of KA-ANDAL, whereas other Donors selects the consultant after TOR (KA) EIA/IEE, so the recruitment of experts for EIA/IEE preparation is relevant with the potentially significant impacts.</li> <li>- Requirement of AMDAL document compiling consultants selection in Indonesia is those shall have competency certificate (ATPA and KTPA), not considering similar experiences on respective activities</li> <li>- Indonesia regulations set certification process for AMDAL document compiling, however Indonesia still lack in regulations which set private funded projects on consultant selection method..</li> </ul>	Partly equivalent	<ul style="list-style-type: none"> <li>- In addition ATPA or KTPA certificate, the AMDAL document compiling consultant shall have similar specified experiences, especially for team leader of team.</li> </ul>

ADB Framework	Indonesian Regulations	Gap	Equivalency	Recommendation
<ul style="list-style-type: none"> <li>• The use of consultant firm selection methods are Quality and Cost-Based Selection (QCBS) or Quality-Based (QBS). QCBS method is used for consultant firm selection to carry out EIA/IEE, when the scope of work can be precisely defined; the TOR are well specified and clear; and schedule and personnel needed can be estimated. Application of QBS method when assignments are complex or highly specialized and therefore it is difficult to define precise TOR; the downstream impact is so large that the quality of the services is importance; and assignments can be carried out in substantially different ways. In most cases, the TOR for EIA/IEE can be defined and the cost and personnel time can be estimated in advance, so QCBS is used for selecting consulting firms.</li> <li>• Recruitment of consultant firm to carry out EIA/IEE is conducted after scoping, so TOR of EIA/IEE has been clear on needed expertise of personnel and schedule for preparation of EIA/IEE document.</li> </ul>				

### **2.3.13. Process of EIA Document Review and its Institution**

#### **ADB**

274. The operations department reviews the EIA, IEE, resettlement plan, IPP, and/or other instruments that have been submitted by the borrower/client, against the applicable safeguard policy principles and requirements set out in its Safeguard Policy Statement. For Category A projects, the operations department also seeks review and comments from Environment and Safeguards Division (RSES) of the Regional and Sustainable Development Department (RSDD). If the review of the operations department and/or RSES identifies gaps between the documents submitted by the borrower/client and applicable ADB requirements, the project team advises and assists the borrower/client in filling such gaps, and requires the borrower/client to address these concerns during the project preparation phase. A review by RSES is not mandatory for Category B project, but the operations department may request RSES to review and comment on IEE and other safeguard documents as well.

275. As of 2009 (at the time of SPS publication), ADB had a total of 48 professional staff positions for safeguard review work, including 26 environmental specialist positions and 22 social development specialist positions. ADB has additional 17 local staff positions working on safeguards, including 8 environmental officer positions, and 9 social safeguard officer positions, 12 positions of which are allocated in 7 resident missions. The total number today exceeds 100.

276. The project team assesses the capacity of borrower/client to address environmental and social impacts and risks, identifies capacity building needs, and integrates necessary capacity building programs into the project design. Also, Chief Compliance Officer can request operations departments to submit the safeguard documents of category B projects for review by RSES.

277. For a highly complex and sensitive project, the operations department ensures that the borrower/client engages an independent advisory panel during project preparation and implementation, in consultation with ADB *Tanggung LNG* project is one of recent examples in Indonesia.

278. ADB's safeguard due diligence and review emphasizes environmental and social impact assessments and the planning process, in addition to safeguard documentation. Due diligence and review involves field visits as well as desk review. Through such due diligence and review, ADB will confirm that:

- (i) All key potential social and environmental impacts and risks of a project are identified;
  - (ii) Effective measures to avoid, minimize, mitigate, or compensate for the adverse impacts are incorporated into the safeguard plans and project design;
  - (iii) The borrower/client understands ADB's safeguard policy principles and requirements as laid out in Safeguard Requirements 1–4 in Safeguard Policy Statement and has the necessary commitment and capacity to manage social and environmental impacts and/or risks adequately;
  - (iv) The role of third parties is appropriately defined in the safeguard plans; and
  - (v) Consultations with affected people are conducted in accordance with ADB's requirements.
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279. Additional assessment and/or improvement in the safeguard plans may be required in case EIA/IEE submitted to ADB does not satisfy ADB's safeguard requirements. When the borrower/client has inadequate capacity to carry out safeguard plans for a proposed project, capacity building component (s) will be incorporated into the project. And also the usage of qualified and experienced experts in the environmental assessment and the EMP for highly complex and sensitive projects during preparation and implementation.

### World Bank

280. For Category A and B projects, the Task Team (TT) and the Regional Safeguards Advisor (RSA) review the results of the EA in order to ensure that any EA report is consistent with the TOR agreed with the borrower. The RSA also sends a copy of Category A reports to the Environment Department of the Sustainable Development (SD) Network. According to BP4.01, the review gives special attention to, among other things, the nature of the consultations with affected groups and local NGOs and the extent to which the views of such groups were considered; and the EMP with its measures for mitigating and monitoring environmental impacts and, as appropriate, strengthening institutional capacity. If not satisfied, the RSA may recommend to Regional management that: i) the appraisal mission be postponed; ii) the mission be considered a pre-appraisal mission; or iii) certain issues be re-examined during the appraisal mission as shown below.

281. Out of 10 safeguard policies of the World Bank, the Bank's Legal Vice Presidency monitors compliance with the policies addressing international waterways and disputed areas. The Sustainable Development (SD) Network monitors all other safeguard policies including environmental assessment. The World Bank has strengthened the systems for oversight of safeguard issues by creating a central Quality Assurance and Compliance Unit (QACU), staffed by senior safeguard specialists. The unit provides greater support to the operational staff responsible for implementing safeguard policies and promotes harmonization of safeguard issues across regions. In collaboration with QACU, all regions of the Bank are routinely conducting detailed project portfolio assessments to identify and address risks related to safeguard policy issues. Projects that pose special risk are jointly reviewed by regional management and the corporate QACU group prior to project appraisal.

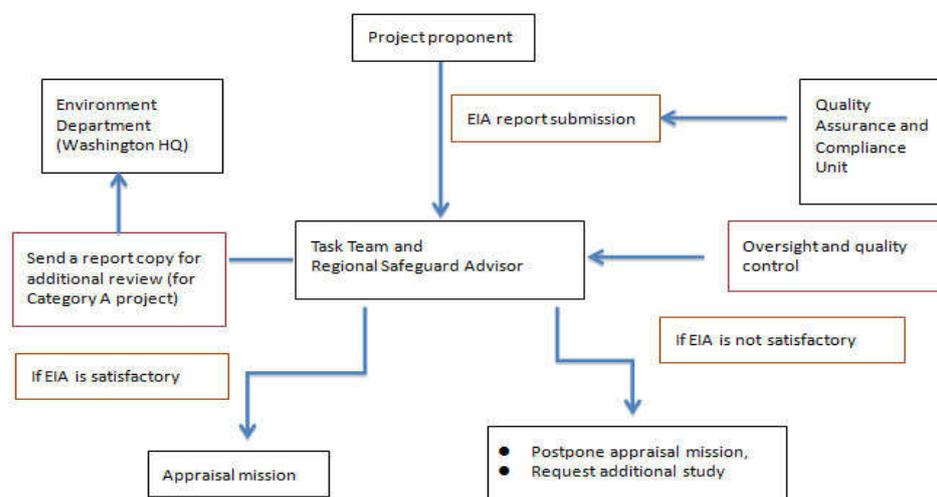


Figure 2-8: Mechanism of EIA Document Review (The World Bank)

282. The World Bank provide independent advisory panels during preparation and implementation of projects that are highly risky or that involve serious and multi-dimensional environmental.

### **JICA**

283. EIA/IEE is reviewed by about 15 staffs in the Environmental and Social Considerations Supervision Division in Tokyo. Unlike ADB and World Bank, there is no separation between environment and social safeguard in the review process. In other words, the same expert reviews both EIA and RAP.

284. The review is mainly done by desk review of documents, but for Category A projects, staffs from the Environmental and Social Considerations Supervision Division accompanies the appraisal mission to ensure that its environmental and social guidelines are adhered. For Category A project (and for some Category B projects), External Advisory Panel consisting of members from NGO and academia review the safeguard process and documents as well. The meeting of External Advisory Panel for Category A project usually takes place twice during the preparation of EIA report.

### **Indonesia**

285. The procedures for AMDAL document review and environmental permit issuance has been regulated by MOER No. 8/2013. Its Article 3 stated that AMDAL document shall be reviewed by AMDAL Review Commission (ARC). In general the task of ARC is to give recommendation of environmental feasibility or non-feasible to the Minister, Governor, Head of District/Mayor according to their authority (Article 9 point 1).

286. AMDAL Review Commission (ARC) consists of Central ARC that established by the Minister; Provincial ARC that established by the Governor; and District/City ARC that established by Head of District/Mayor. In order to be enable to implement its function to review AMDAL document, each ARCs is obliged to have license from the Minister, Governor or Head of District/Mayor according to their authority (Article 3 point 3 of MOER No. 8/2013).

287. The ARC organization structure is the same for all levels of Central, Provincial or District/City ARC, consists of Head, Secretary and member. Central ARC shall be chaired by Echelon I official who is in charge of AMDAL in the Ministry of Environment; Provincial ARC Province is chaired by Echelon II official in the Provincial Environment Institution and District/City ARC is chaired by Echelon II official of District/City Environmental Institution.

288. In the implementation ARC is being assisted by: ARC Technical Team and ARC Secretariat (Article 5 of MOER No. 8/2013). In general the task of ARC Technical Team is conducting and delivering review results of technical r and quality aspects of KA-ANDAL, ANDAL, and RKL-RPL to Head of ARC.

289. Similar to ARC, Technical Team is also established by the Minister for Central ARC technical team, Governor for Provincial ARC technical team and Head of District/Mayor for District/City ARC technical team. The membership of technical team consists of various experts such as:

- Experts from various technical institution whose in charge with related activity;
  - Experts on environment from environmental institution;
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- Experts on the field which related with activity plan and environment impact of the plan activity.

290. In specific the tasks of technical team based on MOER No. 8/2013 Attachment I item E, are:

- Technically review and conduct quality control of KA, ANDAL and RKL-RPL along with the revision through:
  - o Project test;
  - o Document quality test which cover consistency test, relevancy test, mandatory test, profundity test; and
  - o Review on environment feasibility and impropriety of the business plan and/or activity based on the review result which is attached on the ANDAL and RKL-RPL and the environment feasibility criteria;
- Deliver the review result of KA, ANDAL, and RKL-RPL to the ARC Head; and
- Deliver the feasibility or impropriety review result of environment business plan and/or activity with technical things that must be concerned by the ARC member in providing feasibility or impropriety recommendation.

291. Basis for environmental feasibility evaluation is referring to ten (10) criteria as follow: 1). Compatibility to spatial planning; 2). Policy in environmental safeguard and management as well as natural resources; 3). Defense and security interests; 4). Accurately assumption on impact scale and characteristic; 5). Holistic evaluation result toward the entire impact; 6). Capability of proponent and/or related parties that responsible to cope with negative significant impact; 7). Plan of activity that shall not interfere the community/social values; 8). Plan of activity that shall not interfere the ecological entities; 9). Plan of activity that shall not interfere activities around project location; and 10). Plan of activity that shall not exceed the environment bearing capacities.

292. Guidelines and manual to review AMDAL Document also has been accommodated by MOER No. 8/2013. AMDAL document that shall be reviewed in term of administrative, staging (in feasibility study or DED stage in order detailed of information that should be presented can be predicted) and quality.

### ***Comparison and Gap Analysis***

293. EIA review documents by Donors usually involve the qualified professionals Reviewers such as by Environmental and Safeguard Division (RSES) of ADB Projects, by Task Team and Regional Safeguard Advisor (RSA) for World Bank Projects, and by Environmental and Social Considerations Supervision Division for JICA's projects including External Advisory Panel consisting of members from NGO and academia review especially for Category A project.

294. The institutions involved in the process of AMDAL are reflected in the composition of Technical Team and AMDAL Review Commission.

295. The quality of the AMDAL Review Commission is mostly depended on the quality of its Technical Team members who shall be in charge to review the technical and quality aspects. Since the composition of the Technical Team consists of the Experts from various technical institutions related to the proposed activity, their participation in the ARC Technical Meeting shall be depended on the staffs who is assigned to attend the ARC Technical Team meeting. If the person who is participating the Technical team meeting has good qualifications, then his/her review results on the AMDAL documents shall be good, otherwise, it shall result in the low quality of AMDAL documents. Even though member of the technical team consists of several expertises such as to sectors related to the plan of activity and environmental impact, yet it has not been stated specifically the required expertise for often there is less suitability in selecting independent experts as member for technical team. Besides, there is no specific criteria applied by AMDAL Review Commission in selecting those independent experts, mainly in the local environmental institutions located far central (:Jakarta). Most of the independent experts in the recruitment is the familiar persons and often retired regional ex-officers.

296. These become serious issues particularly in remote islands. MOE's monitoring visits often found that inadequate AMDAL is approved in some extreme cases. Although the involvement of Experts on related field such from Universities, Practitioners, or Association of Professionals has been regulated by regulation, however, in its implementation especially in the remote areas or hinder-land areas, it is difficult to find such experts. Therefore, the quality of AMDAL documents in the remote areas is lower compared to the quality of documents in Java Island.

297. Limited capacity/resources often undermine the rigor of AMDAL review. There is a total of environmental institution in Indonesia with varying staff capacity and resources available.

298. The AMDAL Review Commission includes representative of affected peoples, members of NGO and academia. There is need for a mechanism to prevent potential conflict of interests. In Vietnam, for example, the Law on Environment states that those who participate directly in preparation of EIA reports are not eligible for membership of a review commission. In practice however, conflicts of interest often arise because of the limited numbers of suitably qualified personnel who are available to prepare and appraise EIA documents. Experts serving on review commissions often have formal or informal links to the organizations and individuals responsible for preparing the EIA. Direct participation of affected people in the review process can potentially be used to manipulate the decision, for example by bribing local leader to express strong support to the project.

299. Related to the above recommendation, AMDAL Review Commission (and/or its members) should be held accountable if they approve inadequate AMDAL while knowing that the report does not satisfy regulatory requirements. Any sanction/penalty will need to be introduced with caution, and along with capacity development.

300. Other issue that also affected to the review activity done by the Technical Team of ARC is political issue. Since autonomy era which local environmental institution (province/regency/municipality) is under the Governor/Regent/Mayor in their structural organization, it may be difficult for the ARC which is established by the Governor/Regent/Mayor to reject the AMDAL

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report which can cause the potency on the delay of the project implementation especially for the project has high-level political support.

301. Another difference is the role of independent body to support/complement the review process. While the AMDAL Review Commission is the sole body for review AMDAL document in Indonesia. The evaluation by donors usually carried out toward several different segments (e.g. task team, RSA, QACU for the World Bank and involvement of Advisory Panel for JICA).

***Recommendations***

302. Complement the AMDAL Review Commission with external, independent experts/body (pool experts) to strengthen team member of technical team from expertise party.

Table 2-19: Comparison between Requirements of Donor/Lenders and Indonesian Regulations for AMDAL Review Process and its Institutions

ADB Framework	Indonesian Regulations	Gap	Equivalency	Recommendation
<ul style="list-style-type: none"> <li>• Review of ADB is assess fulfillment of SPS requirements in document of EIA, IEE, resettlement plan, IPP, and/or other instruments that have been submitted by the borrower/client</li> <li>• Operations Department will review those documents. As for project category A, operations department also seeks review and comments from Environment and Safeguards Division (RSES). A review by RSES is not mandatory for Category B project, but the operations department may request RSES to review and comment on IEE and other safeguard documents as well.</li> <li>• If the review of the operations department and/or RSES identifies gaps between the documents submitted by the borrower/client and applicable ADB requirements, the project team advises and assists the borrower/client in filling such gaps, and requires the borrower/client to address these concerns during the project preparation phase.</li> <li>• For a highly complex and sensitive project, the operations department ensures that the borrower/client engages an independent advisory panel during project preparation and implementation.</li> <li>• ADB's safeguard due diligence and review emphasizes environmental and social impact assessments and the planning process, in addition to safeguard documentation. Due</li> </ul>	<ul style="list-style-type: none"> <li>• The procedures for AMDAL document review and environment document issuance has been regulated by MOER No. 08 of 2013. Its Article 3 stated that AMDAL document shall be reviewed by AMDAL Review Commission (ARC). In general the task of ARC is to give recommendation of environmental feasibility or non-feasible to the Minister, Governor, Head of District/Mayor according to their authority (Article 9,Point 1).</li> <li>• ARC reviews environmental feasibility or non-feasibility criteria and submits it in recommendation form to Minister, Governor, and/or regent/mayor. Those 10 feasibility or non-feasibility criteria are: compatibility to spatial planning; policy in environmental safeguard and management as well as natural resources; defense and security interests; accurately assumption on impact scale and characteristic; holistic evaluation result toward the entire impact; capability of proponent and/or related parties that responsible to cope with negative significant impact; plan of activity that shall not interfere the community/social values; plan of activity that shall not interfere the ecological entities; plan of activity that shall not interfere activities around project location; and plan of activity that shall not exceed the environment bearing capacities</li> <li>• Central ARC is leaded by echelon I incharged for AMDAL in MOEF; provincial ARC is</li> </ul>	<p>There is no specific criteria applied by AMDAL Review Commission in selecting those independent experts, mainly in the local environmental institutions located far central (:Jakarta).</p>	<p>Partly equivalent</p>	<p>Equips ARC with independent experts from outside to strengthen technical team.</p>

ADB Framework	Indonesian Regulations	Gap	Equivalency	Recommendation
<p>diligence and review involves field visits as well as desk review.</p> <ul style="list-style-type: none"> <li>• Through such due diligence and review, ADB will confirm that:               <ol style="list-style-type: none"> <li>1) All key potential social and environmental impacts and risks of a project are identified;</li> <li>2) Effective measures to avoid, minimize, mitigate, or compensate for the adverse impacts are incorporated into the safeguard plans and project design;</li> <li>3) The borrower/client understands ADB's safeguard policy principles and requirements as laid out in Safeguard Requirements 1–4 in Safeguard Policy Statement and has the necessary commitment and capacity to manage social and environmental impacts and/or risks adequately;</li> <li>4) The role of third parties is appropriately defined in the safeguard plans; and</li> <li>5) Consultations with affected people are conducted in accordance with ADB's requirements.</li> </ol> </li> <li>• Additional assessment and/or improvement in the safeguard plans may be required in case EIA/IEE submitted to ADB does not satisfy ADB's safeguard requirements. When the borrower/client has inadequate capacity to carry out safeguard plans for a proposed project, capacity building component (s) will be incorporated into the project.</li> </ul>	<p>chaired by echelon II in provincial environmental office and regency/city ARC is led by echelon II in regency/city environmental office.</p> <ul style="list-style-type: none"> <li>• ARC is assisted by a technical team and secretariat in review implementation. Member of technical team consists of experts such as:               <ul style="list-style-type: none"> <li>- Experts from various technical institution whose in charge with related activity;</li> <li>- Experts on environment from environmental institution; and</li> <li>- Experts on the field which related with activity plan and environment impact of the plan activity.</li> </ul> </li> <li>• ARC reviews AMDAL document based on some tests such as:</li> <li>• KPA assess a document of AMDAL based on several test, as follows:               <ul style="list-style-type: none"> <li>- Project test;</li> <li>- Document quality test which cover consistency test, relevancy test, mandatory test, profundity test; and</li> <li>- Review on environment feasibility and propriety of the business plan and/or activity based on the review result which is attached on the ANDAL and RKL-RPL and the environment feasibility criteria.</li> </ul> </li> </ul>			

### **2.3.14. Determination of the Environmental Feasibility**

303. In Indonesia, the AMDAL process and Environmental Permit process are not the same and thus a separate review (in addition to AMDAL review discussed above) is carried out to ensure environmental feasibility of the proposed project. However, donors do not have such a process. While safeguard issues are reviewed during project appraisal, this is basically re-confirmation on the already approved EIA and other safeguard documents. It is highly unlikely that additional study beyond approved EIA etc. is required at this stage.

304. The decision of feasibility on an activity plan is absolutely necessary for AMDAL process in Indonesia by bearing in mind the by definition AMDAL is the review of important environmental impacts of a Business and/or Activity which is planned which is then needed in the decision making process of the Business and/or Activity implementation (Government Regulation No. 27/2012, article 2).

305. The feasibility criteria based on MOER No. 8/2013 include: conformity on the spatial planning, policy in PPLH and natural resources; security and defense important; impact estimation of chemical bio-geophysics, social economy, culture, and community's welfare has been done carefully by mentioning scale and impact; showing evaluation result holistically of all significant impact as one related unity; the ability of the proponent in handling negative impact which is planned by technology, social and institutional approach; activity plan do not interfere social values and community's views and also not interfere the ecology entity which is the key species, have important ecology values (ecological importance) and economy (economic importance) and scientific (scientific importance); not cause disruption of the existing activity around activity plan; not exceeding the supporting capacity and carrying capacity of environment (MOER No. 8/2013, article 15).

306. Donor considers feasibility not only on environmental factor but also based on financial consideration. The unfeasibility which is caused by environmental factor will be given a way out by impact mitigation according to the technological advance. It means no matter how big the impact that happen will still be managed by using the current technological approach.

307. World Bank will provide decision to support if the impacts are predicated in part on the expectation that the EMP will be executed effectively. Consequently, the Bank expects the plan to be specific in its description of the individual mitigation and monitoring measures and its assignment of institutional responsibilities, and it must be integrated into the project's overall planning, design, budget, and implementation. Such integration is achieved by establishing the EMP within the project so that the plan will receive funding and supervision along with the other components.

### ***Comparison and Gap Analysis***

308. Decision of environmental feasibility does not consider cost for environmental management and monitoring. It still considers the capability of proponent to handle of negative impact emerging from the activity, planning by technological, social and institution approach.

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***Recommendation***

309. Basically, the considerations from Donors have been accommodated by the MOER No. 8/2013.

310. To mention cost for management and monitoring plan in the Appendix of RKL-RPL in order to clear opinion and capability of proponent at the management and monitoring plan which have been made.

Table 2-20: Comparison between Requirements of Donor/Lenders and Indonesian Regulations for Stipulation and Determination of the Environmental Feasibility

ADB Framework	Indonesian Regulations	Gap	Equivalency	Recommendation
<p>- Other Donors consider feasibility based on either environmental or financial factors. As for environmental non-feasibility, the mitigation measures will be taken with use of updated advanced technology</p>	<ul style="list-style-type: none"> <li>• Minister/Governor/Regent/Mayor decides environmental feasibility in accordance with MOER No. 08/2013.</li> <li>• Environmental feasibility criteria are:               <ul style="list-style-type: none"> <li>- Compatibility to spatial planning;</li> <li>- Policy in environmental safeguard and management as well as natural resources;</li> <li>- Defense and security interests;</li> <li>- Accurately assumption on impact scale and characteristic;</li> <li>- Holistic evaluation result toward the entire impact;</li> <li>- Capability of proponent and/or related parties that responsible to cope with negative significant impact;</li> <li>- Plan of activity that shall not interfere the community/social values;</li> </ul> </li> </ul>	<p>Environmental feasibility decision does not consider cost of environmental management and monitoring. However, consideration of project proponent capacity is necessary for controlling arisen significant impacts from the proposed activity using technology, social and institutional approaches.</p>	<p>Partly equivalent</p>	<p>Basically, consideration of other Donor has been accommodated in MOER No. 08/2013.</p> <p>Environmental management and monitoring cost should be included in appendix of RKL-RPL to ensure project proponent capacity in management and monitoring plan.</p>

ADB Framework	Indonesian Regulations	<i>Gap</i>	Equivalency	Recommendation
	<ul style="list-style-type: none"> <li>- Plan of activity that shall not interfere the ecological entities;</li> <li>- Plan of activity that shall not interfere activities around project location; and</li> <li>- Plan of activity that shall not exceed the environment bearing capacities</li> </ul>			

### 2.3.15. General Conclusion and Recommendation

311. There are two (2) groups of principle policies in ADB SPS 2009 that are equivalent to AMDAL framework, namely:

1. The first 7 principle policies of ADB SPS 2009 are related to AMDAL compilation procedures in obtaining environmental permit, which include the screening process, environmental assessment, alternative examinations, environmental management plan, consultations, disclosure, monitoring;
2. The last 4 principle policies of ADB SPS 2009 are related to the document contents of AMDAL, which include biodiversity conservation & renewable natural resources, pollution prevention, health & safety and physical cultural resources.

312. With regards to the first 7 policies, there is no significant difference in AMDAL compilation procedures between the donor (ADB SPS 2009) and the applied AMDAL framework policies in Indonesia. Some regulations related to AMDAL compilation procedure that have been published are Law No. 32/2009 about Environmental Protection and Management; Government Regulation No. 27/2012 about Environmental permit; MOER No. 5/2012 about MOER No.5/2012 regarding the Type of Activities that Requires AMDAL; MOER No.16/2012 regarding The Guidelines for Preparing Environmental Documents; MOER No.17/2012 regarding The Guidelines for Public Participation in AMDAL Process and Environmental Permit; MOER No. 8/2013 regarding The Procedure of Evaluation and Checking for Environmental Documents and also Issuing of Environmental Permit; Decree of Minister of Health No. 876/2001 regarding The Technical Guideline of Environmental Health Impact Analysis; Decree of Head of BAPEDAL No. 124/1997 on Guidelines of Public Health Aspect Review in Preparing AMDAL; Decree of Head of BAPEDAL No. 299/1996 on Technical Guidelines of Social Aspect in Preparing AMDAL; Decree of Head of BAPEDAL No. 56/1994 regarding Guidelines of Determination of Significant Impact. In their implementation, several factors need to be addressed such as taking into account the social risk in the screening process and perfecting the public consultation process that involves gender issues, vulnerable people at the project location, accessible information, and involvement of third parties in the monitoring activities.

313. In relation to the second group of policies, deeper assessment should be undertaken on biodiversity if the location of activity is within a protected area. Even though the laws and regulations have been published, their utilization is still undermined by the AMDAL compiler such as for Law No. 5/1990 about Conservation of Bio-natural Resources and its ecosystem; Government Regulation No. 7/1999 about Preserving of Plants and Wildlife; President Decree No. 32/1992 about Protected Area Management, etc. Therefore, it is necessary to incorporate biodiversity issue into AMDAL compilation, especially the subject of biology provide data, analysis and evaluation of biodiversity, in kind of guideline for biodiversity issue analysis.

314. International standards shall be applied if there is no national standards available, for instance, in considering EHS Guideline as reference for health and safety aspects.

315. There are two areas of focus that have not been stipulated in the donor's principles (ADB SPS 2009) in relevance to the executor of AMDAL document

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decision process, including the preparation of safeguard documents, as well as the process and framework of AMDAL documents Review.

316. In the process for compilation and evaluation of AMDAL documents, the compiler parties have applied some complicated procedures, such as training and compilation competency test for the compilers of AMDAL and the evaluators that involve all stakeholders.

317. There is one area of focus that has not been stipulated in the donor's principles (ADB SPS 2009) which is the process of determination of the environmental feasibility after taking into account the environmental risks using the 10 feasibility criteria.



# **CHAPTER 3**

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## **CHAPTER 3 INTEGRATION OF AMDAL IMPLEMENTATION PROCEDURES INTO SPECIFIC PROJECT PERMITTING PROCESS (OUTPUT 2)**

### **3.1 Introduction**

318. The Environmental Impact Assessment (EIA) or AMDAL has been applied since the enactment of Law No. 4/1982 regarding Environmental Management Principals and its Derivatives. This Law insofar has been amended two times into Law No. 23/1997 regarding Environmental Management and then revised into Law No. 32/2009 regarding Environmental Management and Protection. Related to the amendment of those Laws, their derivatives have been made as well, including the Government Regulation No. 27/2012 on Environmental Permit. AMDAL is a pre-condition for obtaining an “environmental permit” issued by some sectoral agencies (mining, forestry, etc.).

319. Despite that AMDAL has been applied for quite long time, yet during its implementation there is still a confusion about the most effective timing (project cycle) to implement AMDAL Study for ensuring that AMDAL may affect the projects decision-making. Therefore, review the current process of AMDAL in sectoral project cycle and recommend any area as best recommendation for AMDAL most effective timing in project cycle are required.

320. By this TA, ADB with GOI will improve its effectiveness for integrating AMDAL Implementation Procedures into specific project permitting process, such as for water resources (river normalization), geothermal, and toll road.

321. The election of specific sectors is related to some consideration such as concession rights at the geothermal sector, land acquisition, and budgeting scheme on government project for water resources, especially river normalization, and also Public-Private Partnership (PPP) scheme for toll road.

### **3.2 Methodology**

322. The approach used for three (3) selected sector as seen in the below figure:



Figure 3-1: Approach for Obtaining Output No. 2

323. Identify and Mapping the Permit Sequence Process in the Three (3) Specific Sectors. It will identify and select the required permits procedures by each specific sectors and analysis on the sequence as well as required conditions for obtaining the permits in those selected sectors.

324. Recognize the mechanism budgeting pattern in water resources sector is very important. Since government projects shall be planned at least one (1) year prior to its execution, proficiency of project cycle within budgeting pattern may support in harmonizing AMDAL process in this project activities.

325. Apply the PPP scheme commonly by government in developing infrastructure sectors. Toll road construction is one of the infrastructure development funded by PPP scheme. It is very important to identify project cycle of this sector. There are four (4) institutions that may become proponent for toll way development, i.e. : Ministry of Public Works cq. Directorate General of Highway - Directorate of Technical Program - Sub Directorate of Free Road and City Road; Toll Road Authority (*Badan Pengelola Jalan Tol/BPJT*); Toll Road Entities (*Badan Usaha Jalan Tol/BUJT*), and local governments.

326. Purpose recommendation or simple guideline for permitting procedures integration. By analyzing the above issues, Consultant shall propose recommendations or simple guidelines for AMDAL implementation procedures of specific sectors and the effective timing to implement AMDAL to the project proponents in which the proponent may reduce the transactional cost and achieve effectiveness and efficiency of AMDAL implementation.

### **3.3 AMDAL Procedures and Process**

327. The AMDAL process has several important objectives. The first and foremost is a decision-making support to prevent projects from high negative environmental impacts. The emphasis of AMDAL, in contrast with other mechanisms for environmental protection such as for cost-effectiveness analysis, is on a systematic, holistic, and multi-disciplinary assessment for the potential impacts of specific projects on the environment. AMDAL also is aimed to support in development decisions information by mandating a consideration for some alternatives. Those are including alternatives for project locations, scales, processes, layouts, operating conditions, or, in some cases, the option of desisting from implementing a project, and ways to prevent, mitigate, and control potential negative environmental and social impacts. The process generally involves a number of steps, i.e. project screening, scoping, reporting (consideration of alternatives, identification of major impacts, and mitigation measures), public participation, review, decision, and monitoring.

328. Basically, the main goal of AMDAL is to affect development decision making by providing sound information on environmental impacts and the facilities to prevent or reduce the impacts. The major outputs of AMDAL process (identification and analysis of the proposed activities' impacts toward environment, Environmental Management Plan (EMP) with the undertaken mitigation measures for minimizing or reducing the impacts and its Environmental Monitoring Program that outline the collected data in relevant to to the proposed activities) shall provide the important facilities for integrating the AMDAL results into the development planning decision process and the concurrent environmental regulatory process.

329. In general, an AMDAL has been applied to manage what has defined as "major projects" by based on its type of activity, scale of activity, covered land area, potential environmental impacts, or combination of these factors. Furthermore, those matters have been regulated by regulation of State Minister for Environment No. 05/2012.

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330. For the aim to implement the environmental protection and management, it has been issued Government Regulation No. 27/2012 regarding Environmental Permit. This permit shall be given to some entities that run business and/or activity that obliged to implement AMDAL or UKL/UPL for managing and protecting environment as requirement for obtaining business permit.

331. Environmental permit is aimed to know the feasibility of a business or activity toward the environment and functioned as a tool to control the utilization of resources and management of waste in accordance to requirements mentioned in the regulations.

332. The Government Regulation No. 27/2012 regarding Environmental Permit that specifies its obtaining procedures. Flow chart of this procedure is shown in Figure 3.2 below. Meanwhile, each sectors has their own permit procedure. The Donors also has their own requirements as well. It is sometimes difficult to integrate requirements of AMDAL implementation and procedures for obtaining the permit for each sectors. Therefore, an analysis and recommendations on how to integrate those procedures are required. This TA will describe integration of AMDAL implementation procedure into specific project permitting process in a simplified guideline.

333. Three (3) sectors that taken in this TA as sample cases, i.e. flood control or river normalization, toll road, and geothermal sector will be explored on the integration of their specific permitting requirements with AMDAL regulations.

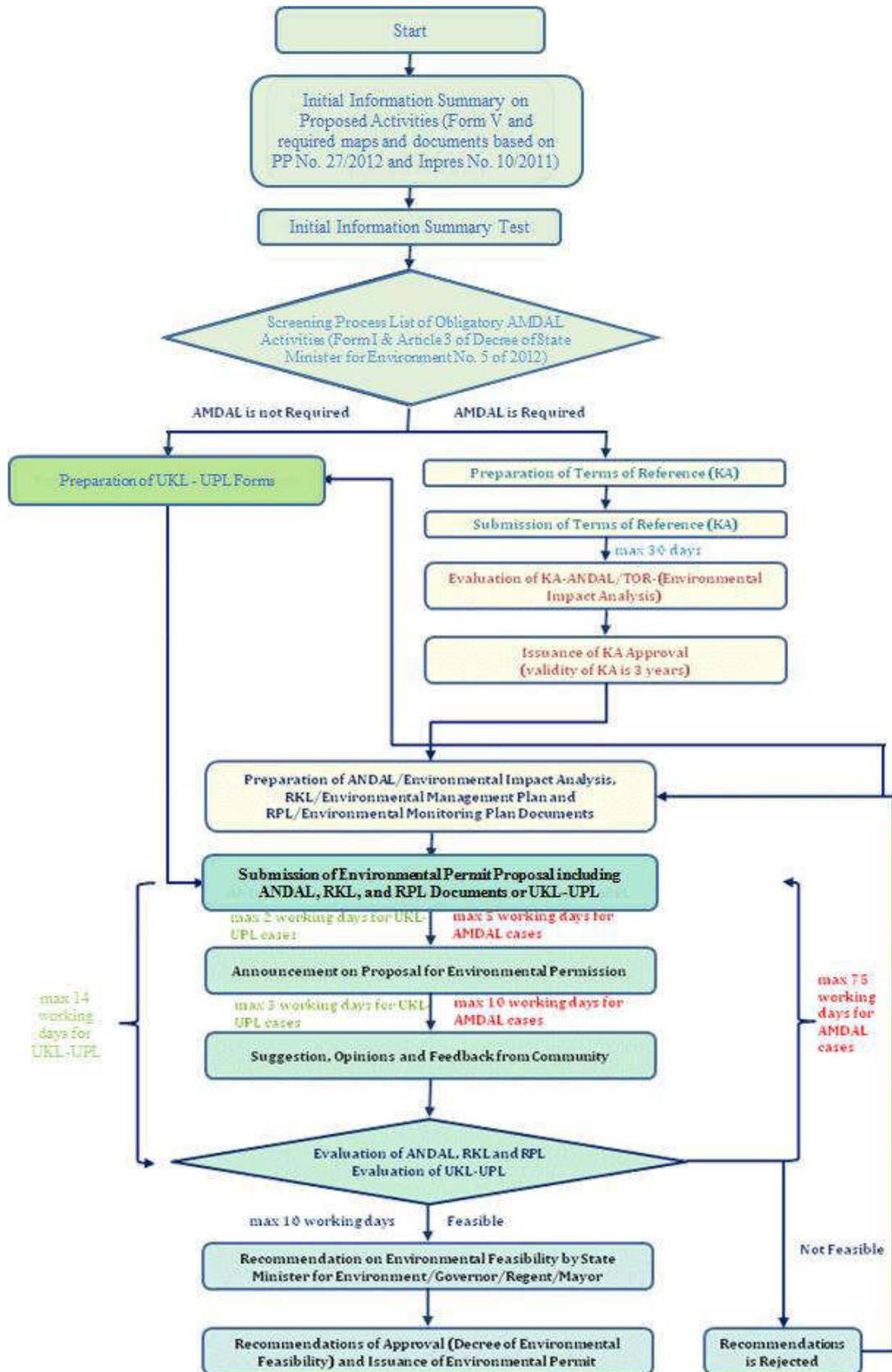


Figure 3-2: Flow Chart of Environmental Permitting Process

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### 3.4 Case Study

#### 3.4.1 Water Resources Sector

334. Normalization of river is one of the flood control activities to enlarge existing reduced river flow and capacity due to erosion and sedimentation. Flood may be caused by the abnormal watershed function. Basically, Government of Indonesia has stipulated regulations on River Basin Management as an effort to mitigate flood control.

335. Some basic regulations related to flood control or river normalization in Indonesia are as follows:

- Law No. 7/2004 regarding Water Resources;
- Law No. 25/2004 regarding National Development Planning System ;
- Law No. 27/2008 regarding Spatial Planning;
- Law No. 32/2009 regarding Environmental Management and Protection;
- Law No. 2/2012 regarding Land Acquisition for Development of Public Interests;
- Government Regulation No. 26/2008 regarding National Spatial Planning Plan;
- Government Regulation No. 42/2008 regarding Water Resources Management;
- Government Regulation No. 38/2011 regarding River;
- Government Regulation No. 27/2012 regarding Environmental Permit;
- Government Regulation No. 37/2012 regarding River Basin Management;
- Government Regulation No. 34/2009 regarding Urban Area Management Guideline;
- Presidential Decree No. 12/2012 regarding River Basin Stipulations;
- Minister of Public Works Regulation No. 18/2009 regarding Guidelines for River Flow Diversion and/or Utilization of Ex-River Section;
- Minister of Public Works Regulation No. 11A/PRT/M/2006 regarding River Basin Criteria and Stipulation;
- Minister of Environment Regulation No. 8/2013 regarding Environmental License and Document Examination and Assessment.

336. The Law No. 7/2004 Article 12 states that surface water management in Indonesia is carried out on a river-basin basis. The stipulation on the river basin area is divided into the river basin area within one district/city, crossing several districts/cities, crossing the province area, state river basin area and national strategic river basin area (Article 13). The management of water resources is established by river basin area with the principle of integration between the surface and ground water.

337. The authority and responsibility of river basin management is regulated in Presidential Decree No. 12/2012 below:

Table 3-1: The Authorized Parties Related to the River Basin Management

CENTRAL GOVERNMENT	PROVINCIAL GOVERNMENT	DISTRICT/MUNICIPAL GOVERNMENT
Management of water resources or river basin with locations: <ul style="list-style-type: none"> <li>- Crossing the provinces: 29 River Basins (RB);</li> <li>- Crossing the State borders: 5 RB;</li> <li>- National Strategic: 29 RB.</li> </ul> Total: 63 RB	Management of water resources or river basin with locations: <ul style="list-style-type: none"> <li>- Crossing the districts/municipalities.</li> </ul> Total: 53 RB	Management of water resources or river basin with locations: <ul style="list-style-type: none"> <li>- Within one district/municipality.</li> </ul> Total: 15 RB

338. Permitting procedures in water resources sector is regulated in Government Regulation No. 42/2008 regarding Water Resources Management and Government Regulation No. 38/2011 regarding River. Permit is required especially for the activities listed in the following table:

Table 3-2: Activities that Required Permit Related to Water Resources and River Utilization

GOVERNMENT REGULATION NO. 42/2008	GOVERNMENT REGULATION No. 38/2011
Permit for water resources management is required for the following activities: <ul style="list-style-type: none"> <li>- construction at water resources such as for bridge, piping, electrical and telecommunication network;</li> <li>- utilization of water resources for specific purposes such as for daily needs fulfilling and agricultural needs by modifying natural condition of water resources, daily basic needs of the group of people and social organizations; irrigation needs required out of the existing ones, and; business activities that utilize water resources;</li> <li>- Weather modification.</li> </ul> <b>Article 95 &amp; 101</b>	Activities at river that shall obtaining permit are: <ul style="list-style-type: none"> <li>- construction at river section;</li> <li>- construction that affects to the change of river flow and groove;</li> <li>- utilization of riverbanks and riparian;</li> <li>- utilization of ex-river;</li> <li>- utilization of river water out of the daily needs use and agriculture for existing irrigation system;</li> <li>- utilization of river for water supply;</li> <li>- utilization of river as transportation means;</li> <li>- utilization of river at forest area;</li> <li>- waste water dumping to the river;</li> <li>- making mining commodity at the river;</li> <li>- utilization of river for fishery by using <i>keramba</i> or floating net.</li> </ul> <b>Article 57</b>

339. Procedures for obtaining permit and related regulations in Water Resources Sector were stipulated in Regulation of Minister of Public Works No. 18/PRT/M/2009 regarding Guidelines for River Flow Diversion and/or Utilization

of Ex-River Section. This regulation is mainly managed permit application for rivers that crossing provinces, crossing state borders and national strategic rivers, which are under authority of the Central Government. For other rivers authorized by Provincial and District/Municipal Governments, the permit regulations are stipulated by each Local Government by referring to the above regulation. The guidelines aims to provide guidance for managing the river flow direction and/or utilization of the ex-river section for the river function and preservation shall be sustained and maintained.

340. Basically, based on MOER No. 05/2012, AMDAL is required for river normalization activity with total length more than five (5) km for metropolitan, more than ten (10) km for cities and more than fifteen (15) km for rural areas and/or dredging volume more than five hundred thousand (500,000 m<sup>3</sup>). Ideally, river normalization is made after AMDAL and Detailed Engineering Design (DED) have been completed. In its implementation, however, many river normalization activities have been implemented without any AMDAL documents or, sometimes even AMDAL is prepared during the implementation stage. In accordance to the Government Regulation No. 27/2012, an environmental permit required for this construction activities as well.

341. Screening process as mentioned above does not specifically consider the social aspect. Basic consideration is merely for activity with river length scale and dredging volume to be normalized. However, scientific reasons state that there is social impact due to excavated soil around the river.

342. River normalization is generally divided into three (3) stages: Preparation Stage, Construction Stage, and Post Construction Stage. Preparation stage covers general planning, pre-feasibility study, feasibility, technical planning. Construction stage covers pre-construction (land acquisition activity), construction, and post construction covers operational and maintenance. Post operational stage covers post-project evaluation.

343. Project cycle for river normalization in DKI Jakarta Province is shown the following table.

Table 3-3: Stages of River Normalization Activity in DKI Jakarta

No	Activity Stages	Result	Period	Information
<b>A</b>	<b>Preparation Stage</b>			
1	General Planning	- Social economy study; - Land use plan; - Geology map; - Hydrology analysis; - Water quality management; - River water management; - Flood management master plan; - Flood controlling recommendation and water conservation.	6 - 7 months	-
2	Pre-feasibility study	- Technical and economy feasibilities from several alternatives.	6 - 7 months	- Sometimes not necessary to be implemented.

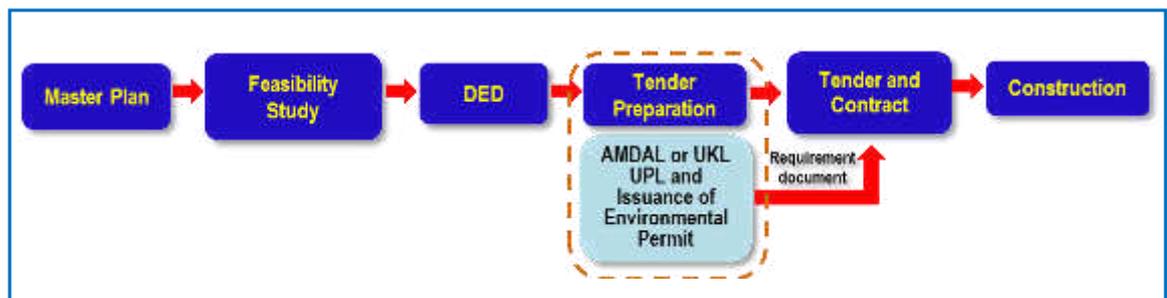
No	Activity Stages	Result	Period	Information
3	Feasibility Study	<ul style="list-style-type: none"> <li>- More detailed social economy study;</li> <li>- Hydrology analysis;</li> <li>- Project priority;</li> <li>- Topography data;</li> <li>- Geotechnical investigation;</li> <li>- Design discharge;</li> <li>- Flood management preliminary design;</li> <li>- Construction plan;</li> <li>- Cost estimation;</li> <li>- Implementation plan;</li> <li>- AMDAL/UKL-UPL implementation</li> </ul>	24 months	-
4	Technical Planning	<ul style="list-style-type: none"> <li>- Detail data of topography;</li> <li>- Land investigation;</li> <li>- Hydrology analysis;</li> <li>- Hydraulic analysis;</li> <li>- Quality/technical analysis;</li> <li>- Structure analysis.</li> </ul>	6 - 12 months	-
<b>B</b>	<b>Construction Stage</b>			
5	Pre-Construction (Land Acquisition)	<ul style="list-style-type: none"> <li>- Land acquisition plan;</li> <li>- Land acquisition implementation (already receive trace license which is published by the Governor &amp; Environmental Permit Agency).</li> </ul>	12 months	-
6	Construction	<ul style="list-style-type: none"> <li>- DED review by contractor.</li> </ul>	Multi-years	-
7	Operational & Maintenance	<ul style="list-style-type: none"> <li>- After the completion of construction stage.</li> </ul>		-
<b>C</b>	<b>After Construction</b>			
8	After Project Evaluation	-		

344. A discussion was held with BBWS Ciliwung-Cisadane for the purpose of strengthening this Study analysis results. Concept for flood control in *Jabodetabek (Jakarta, Bogor, Depok, Tangerang, Bekasi)* area has been stipulated in Master Plan 73 (Master Plan For Drainage and Flood control of Jakarta) and Master Plan 97 (Master For Comprehensive River Water Management Plan in Jabotabek), which has accommodated all considerations

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for the river basin management from the upstream to downstream integratedly. Based on BBWS's past experiences that AMDAL or UKL-UPL document usually provided after the completion of Detailed Engineering Design (DED). During the DED, total volume of works and total of people affected by the project may calculate more accurately and hence, estimation on the impacts and its mitigation measures can be prepared more detailed and implementable. DED and AMDAL document are prepared as for the references in preparing document of land acquisition plan and implementation of construction works.

345. The following figure presents AMDAL implementation for river normalization activities in BBWS Ciliwung Cisadane.



Source: Modified based on discussion with BBWS Ciliwung Cisadane

Figure 3-3: Implementation of AMDAL and Environmental Permit for River Normalization in BBWS Ciliwung Cisadane

346. According to Government Regulation No. 27/2012 regarding Environmental Permit, it is stated that AMDAL may be prepared in planning stage, i.e. in feasibility study or technical design stage. In the normalization activity, AMDAL preparation and environmental permit should be performed during feasibility stage after preliminary design stage in order AMDAL may contribute input in detail design and implementable for managing impact of river normalization activities. On the other side, provided data in preliminary design is sufficient for preparing AMDAL document. The following figure shows the procedure of AMDAL implementation and environmental permit for river normalization.

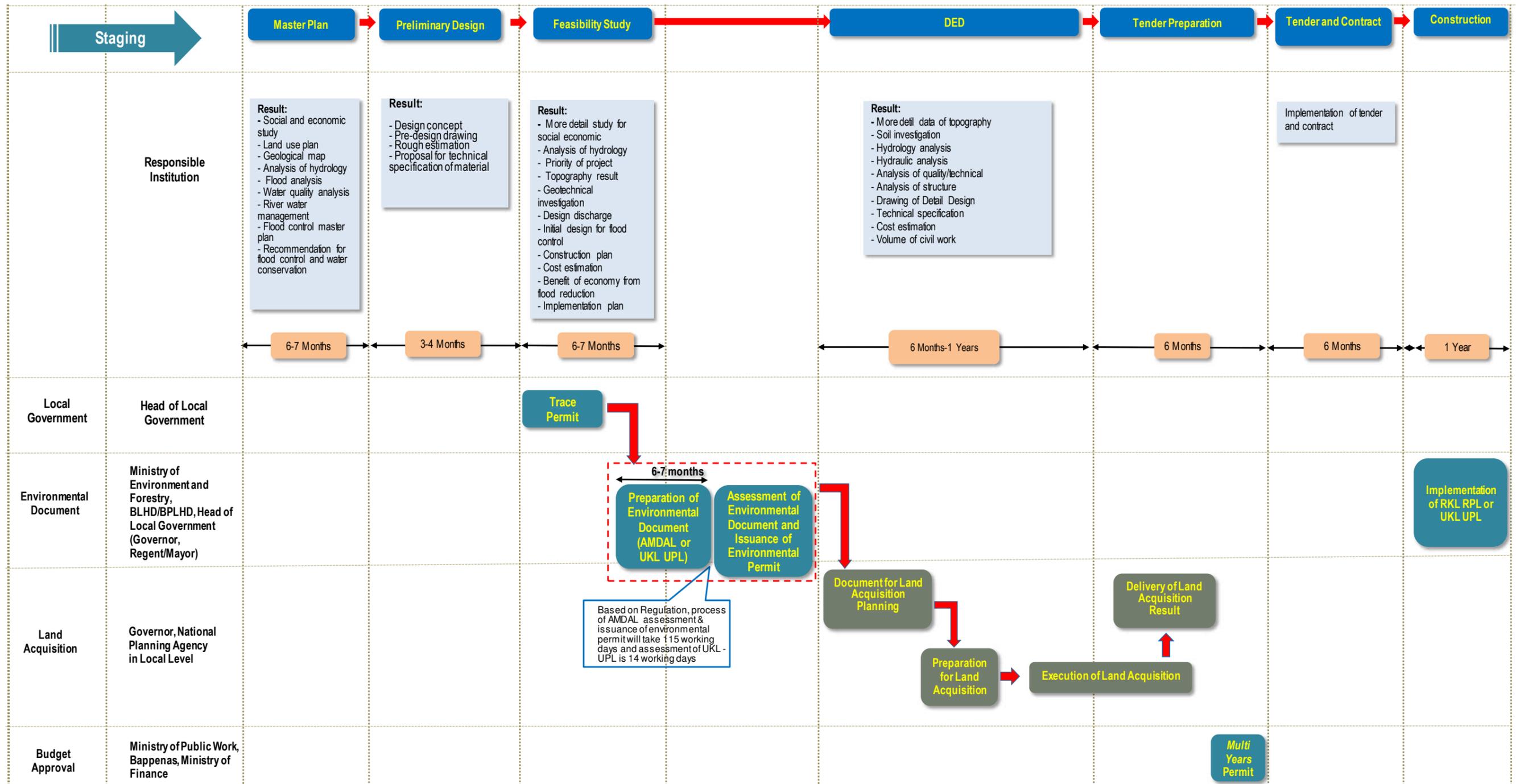


Figure 3-4: Procedures Relates AMDAL and Environmental Permit for River Normalization

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## **Technical Guideline for AMDAL Implementation in River Normalization Activity**

347. Technical guideline is compiled to describe project cycle to project proponent and related parties in river normalization as well as its relation with preparation of environmental document and environmental permit process.

348. The guideline will provide information as follow:

- Screening in River Normalization Activity;
- Process for Environmental Document Preparation and Assessment as well as Issuance of SKKL and Environmental Permit;
- Staging in River Normalization Activity and Licensing;
- Environmental Management and Monitoring that shall be done by Project Initiator in River Normalization Activity;
- Sample of Outline for ESIA Document of River Normalization Activity.

349. The complete technical guideline for the integration of AMDAL implementation into river normalization activity is shown in Appendix.

### **Recommendations**

350. In relation with project cycle, preparation of environmental document and permit shall carried out after preliminary design stage.

351. In case that master plan, feasibility study, and DED of river normalization have been prepared, submission of budget in providing environmental document (AMDAL or UKL-UPL) shall be conducted at least one (1) year prior to tender process and construction implementation. Funding of project is performed in multi years to avoid work of construction with no environmental permit.

352. In case there is new regulation related with the river normalization, the above procedures shall be updated for adjusting with current condition.

### **3.4.2 Geothermal Sector**

353. In accordance to MOER No. 5/2012, the following type of business and/or activity related to renewable energy that obligated to have AMDAL is as following:

- Geothermal work area (WKP)  $\geq$  200 ha;
- Open area for geothermal operation  $\geq$  50 ha;
- Geothermal energy development capacity  $\geq$  55 MW.

354. Related with social impact, there is no specific social consideration in determining whether the social impacts are included as significant impact or not. However, scientific reason has mentioned that social economic impact affects the community in surrounding of project area.

355. Geothermal exploration activity within or in the border with the protected areas is exempted from the obligation to have AMDAL, as specified in Article 3, Sub-Clause (4) of MOER No. 5/2012. In regard to the utilization of protected forest area, Government Regulation No. 24/2010 shall be applied.

356. The laws and regulations that support the geothermal development are as following:

- Law No. 5/1990 regarding Conservation of Natural Resources and Ecosystem;
- Law No. 21/2014 regarding Geothermal;
- Law No. 27/2008 regarding Spatial Planning;
- Law No. 32/2009 regarding Environmental Protection and Management;
- Law No. 2/2012 regarding Land Acquisition for Public Development;
- Government Regulation No. 59/2007 regarding Geothermal Activity;
- Government Regulation No. 26/2008 regarding National Spatial Planning Plan;
- Government Regulation No. 24/2010 regarding Forest Utilization;
- Government Regulation No. 27/2012 regarding Environmental;
- Minister of Environment Regulation No. 5/2012 regarding Bussines and/or Activity with AMDAL Mandatory;
- Minister of Environment Regulation No. 16/2012 regarding Environmental Document Arrangement Guideline;
- Minister of Environment Regulation No. 8/2013 about Environmental Document Examination and Assessment System and Environmental Permit Issuance;
- Minister of Forestry Regulation No. 16/2014 about Forest Land Use Guideline.

357. Staging of geothermal development activities in accordance to Law No. 21/2014 regarding Geothermal and Government Regulation No. 59/2007 is consisting of:

- Preliminary Survey;
- Determination of Working Area and Tender of Working Area;
- Exploration which is including exploration activity and feasibility study;
- Exploitation; and
- Utilization.

358. Since Law No. 21/2014 have been recently published this year, several changes to improve geothermal activity have made and stipulated in Law No. 21/2014 and detiled in the following table:

Table 3-4: Geothermal Activity According to Law No. 21/2014

No.	Items	Remarks
1.	Geothermal has not categorized as mining activity but as a renewable natural resources. Geothermal is green or renewable energy that produced lower greenhouse effect.	Indonesia has the great potency of geothermal. Most of it is located in mountaineous area with agriculture and forest coverage. Therefore, in Law No. 21/2014 definition of "mining" in geothermal activities shall be deleted.  In this Law, Geothermal activity is allowed to run in Production Forest, Protection

No.	Items	Remarks				
		Forest, Conservation Forest, and Sea Area.  Geothermal activity in conservation forest requires permit for environmental services utilization.				
2.	Geothermal business activities have divided into: - Direct Use: tourism, agribusiness, industry and others. Direct Use permit is obtained from minister/governor/mayor/regent; - Indirect Use: for power plant. Working Area ( <i>Wilayah Kerja</i> /WK) is determined for Indirect Use of Geothermal Activity.	Geothermal power plant is categorized as Indirect Use of Geothermal Activity. Working Area ( <i>Wilayah Kerja</i> /WK) is determined for Indirect Use only.				
3.	Geothermal Permit ( <i>Izin Panas Bumi</i> ) has issued for Indirect Use of Geothermal Activities, which covers:  <table border="1" style="margin-left: 20px;"> <tr> <td><i>Exploration</i></td> <td><i>Maximum five (5) years (including FS, (extendable twice, each 1 year)</i></td> </tr> <tr> <td><i>Exploitation &amp; Utilization</i></td> <td><i>Thirty (30) years (extendable)</i></td> </tr> </table>	<i>Exploration</i>	<i>Maximum five (5) years (including FS, (extendable twice, each 1 year)</i>	<i>Exploitation &amp; Utilization</i>	<i>Thirty (30) years (extendable)</i>	In Law No. 21/2014, it is stated that geothermal permit is given for indirect use of geothermal activities (exploration, exploitation, and utilization). Exploration period is five (5) years maximum, including Feasibility Study. Feasibility Study is a part of exploration stage in this Law.
<i>Exploration</i>	<i>Maximum five (5) years (including FS, (extendable twice, each 1 year)</i>					
<i>Exploitation &amp; Utilization</i>	<i>Thirty (30) years (extendable)</i>					

359. The following figure shows the staging of the geothermal development in accordance to Law No. 21/2014.

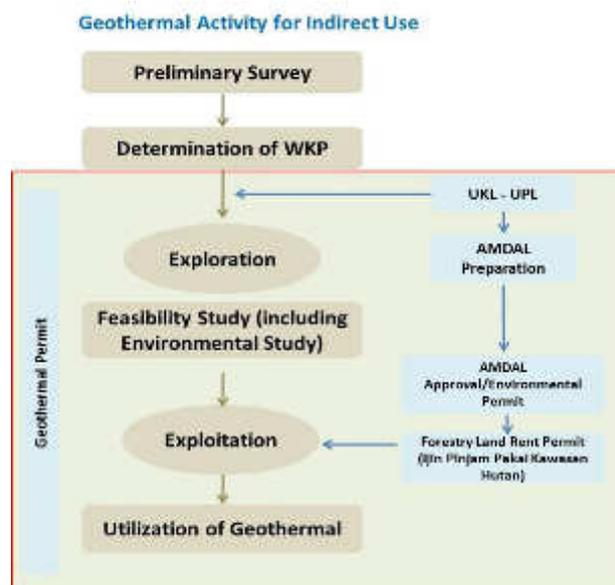


Figure 3-5: Geothermal Development Based on Law No. 21/2014

360. Preliminary Survey covers data collection, data analysis, and presentation of related information on geological, geo-physical and geo-chemical conditions to provide estimation on location and availability of the

resources and its working area. The Minister of Energy and Mineral Resources will stipulate the Geothermal Preliminary Survey Assignment (PSP) Area that based on the following criteria:

- a) The area has large scale of geothermal resources potency and/or high electricity demand in the area;
- b) The geothermal potential area has sufficient national transmission lines and infrastructures;
- c) The frontier/remote area, in where if its geothermal potency is potentially and technically developed, shall bring the significant multiplier effects to the area.

361. Governor/regent/major or business entities may forward a proposed area as the Preliminary Survey Assignment Area to the Minister via the Director General, which in coordination with Geological Institution. Minister may assign the Business Entity to conduct a preliminary survey for supporting preparation of a working area.

362. Procedures to apply the PSP is shown in the following figure:

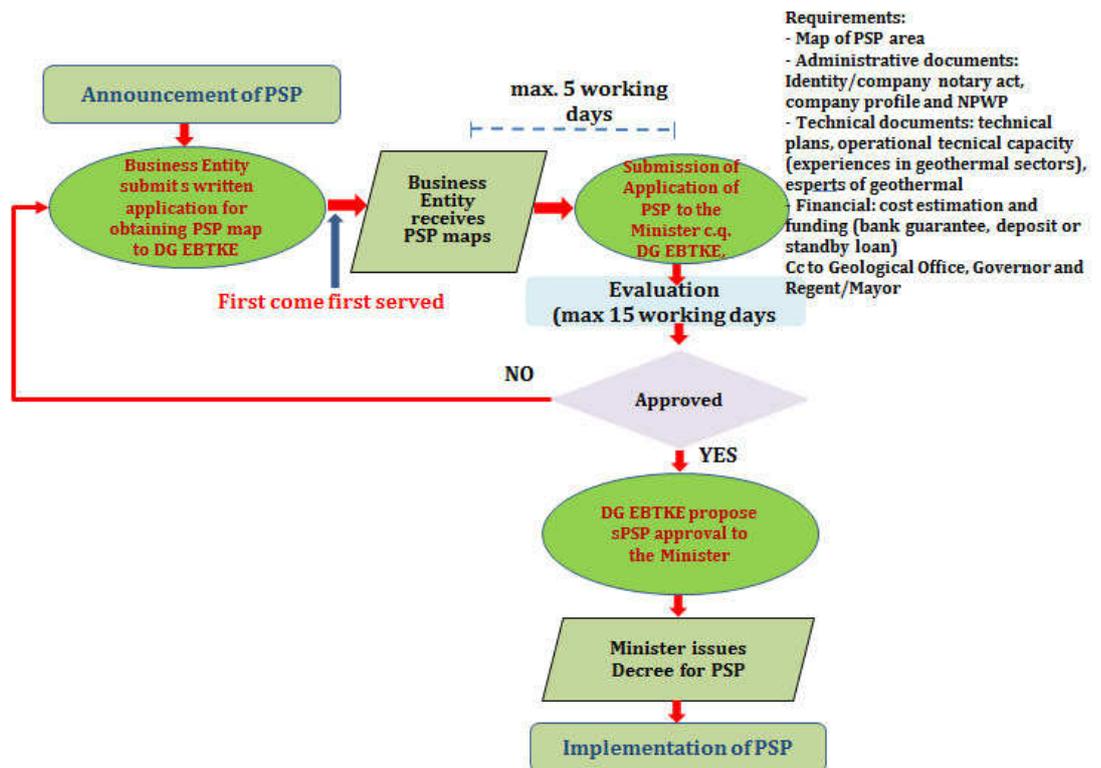


Figure 3-6: Flow Chart of PSP Application Procedure

363. A business entity may only execute one (1) PSP for one PSP area. If a Business Entity did not submit the written application for obtaining PSP map within five (5) working days maximum to the Minister c.q. to DG EBTKE or submit it yet did not comply with all requirements, then the proposed PSP area is stipulated as an open area again and may be offered to another business entity.

364. Any business entity that obtained PSP does not automatically owned the Working Area. It has to participate in the Tender of Working Area, which is implemented by the Tender Committee.

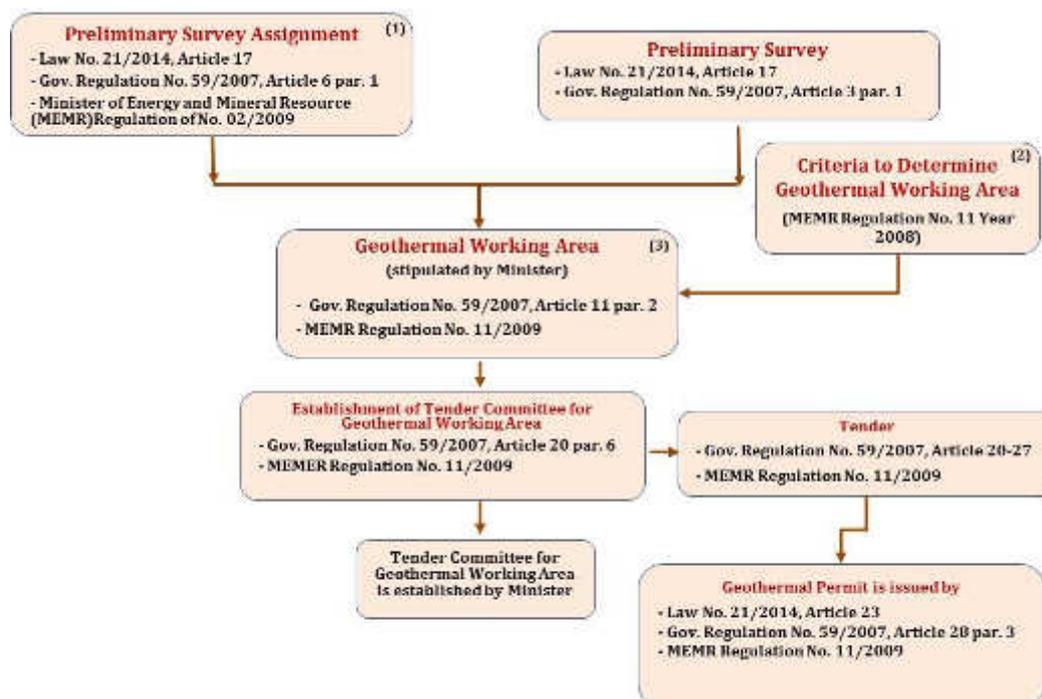


Figure 3-7: Procedure for Geothermal Permit

365. Geothermal Permit shall be awarded in within fourteen (14) working days maximum after the first rank tender participant has fulfilled all of the obligations, including payment of awarded compensation to the business entity that implemented the PSP and will no be granted to the awarded company of the Tender within thirty (30) working days after the notice of award has been issued. The Geothermal Permit shall be given for thirty five (35) years maximum for the following activities:

- Exploration period that shall be valid for five (5) years maximum, including feasibility study, and extendable twice maximum with one (1) year for each;
- Exploitation that valid for thirty (30) years maximum since the completion of exploration and extendable twenty (20) years maximum for each extension period.

366. In case the exploration does not have to be extended, the Geothermal Permit shall be valid for thirty seven (37) years maximum upon the following activities:

- Exploration period that shall be valid for seven (7) years maximum;
- Exploitation that shall be valid for thirty (30) years maximum since the completion of exploration.

367. Geothermal permit holder reserves the right to implement all activities of geothermal development continuously if he has complied all of the following requirements: a) work health and safety; b) environmental protection; and c) geothermal mining techniques.

368. Before commencing his Geothermal Permit period, the Geothermal Permit holder shall submit his long term exploration plan to the Minister c.q. Directorate of General EBTKE, or to the Governor. c.q. Provincial Technical

Office or to the Regent/Mayor c.q. District or Municipal Technical Office within three (3) months maximum since the issuance of Geothermal Permit or two (2) months maximum before the commencement of next fiscal year. The Geothermal Permit holder shall commence his exploration work in six (6) months maximum after the Geothermal Permit issuance. If the Geothermal Permit holder did not commence his exploration work within six (6) months maximum as mentioned above, he must deposit five percent (5%) of his performance bond of exploration or first year of exploitation work to the State Account.

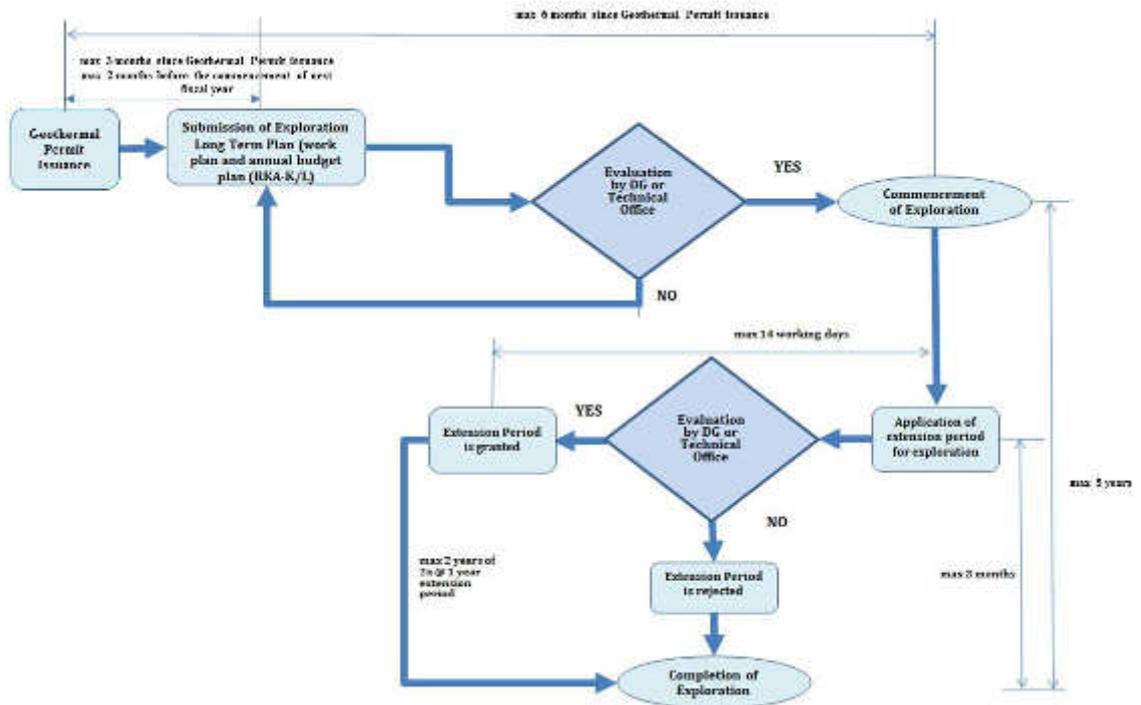


Figure 3-8: Flow Chart of Exploration Process

369. Total working area for exploration that can be handed to one Geothermal Permit holder is maximum two hundred thousand (200,000) ha. In case that during the exploration period there is no geothermal reserve available to be commercially produced, then the Geothermal Permit holder is obligated to return the whole working area to the Minister c.q. Directorate of General EBTKE, or to Governor. C.q. Provincial Technical Office or to Regent/Mayor c.q. District or Municipal Technical Office according to their authorities respectively.

370. The Geothermal Permit holder shall submit his feasibility study plan (schedule, activities and budget allocation plan, and AMDAL study plan) before commencing his Geothermal Permit period to the Minister c.q. Directorate of General EBTKE, or to Governor. C.q. Provincial Technical Office or to Regent/Mayor c.q. District or Municipal Technical Office within three (3) months maximum since the issuance of Geothermal Permit or two (2) months maximum before the commencement of the next fiscal year.

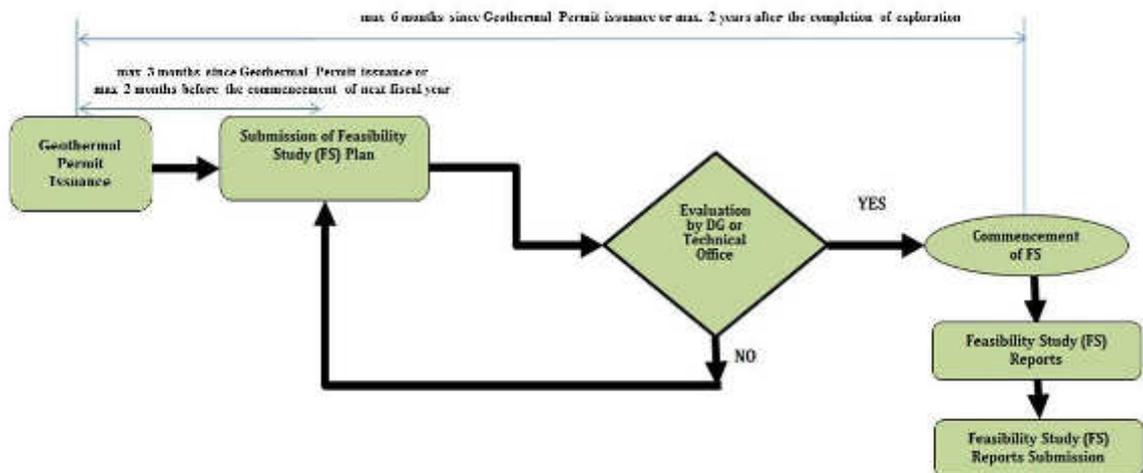


Figure 3-9: Flow Chart of Feasibility Study

371. During the phase of feasibility study, the Geothermal Permit holder reserves the right to conduct evaluation on the geothermal reserves, technical, economical, and environmental feasibilities. The holder is obligated to ensure the environmental management which covers the pollution avoidance and mitigation as well as environmental recovery of environmental function, including the reclamation work. He has to comply with the environmental protection performance which is assessed from various aspects such as: a). environmental feasibility decision based on the environmental review or the UKL-UPL approval; b). compliance with the environmental standard and standard criteria of the environmental damage; c). RPL-RKL implementation report or UKL-UPL; d). environmental friendly technology utilization.

372. Before commencing the exploitation work, the Geothermal Permit holder shall submit feasibility study report including the decision of the environmental feasibility and review result of AMDAL or the UKL-UPL approval, business permit and reclamation and post mining plans to the Minister c.q. Directorate of General EBTKE, or to Governor c.q. Provincial Technical Office or to Regent/Mayor c.q. District or Municipal Technical Office at the latest one (1) year after the completion of the feasibility study.

373. Similar to the exploration work procedure, Geothermal Permit holder shall submit exploitation work and its annual budget plan to the Minister c.q. Directorate of General EBTKE (*Energi Baru Terbarukan dan Konservasi*)/ Directorate General of Renewable Energy and Energy Conservation or to Governor c.q. Provincial Technical Office or to Regent/Mayor c.q. District or Municipal Technical Office within two (2) months maximum before the commencement of next fiscal year. The Directorate of General EBTKE or Technical Office shall submit the result of evaluation to the holder. Total working area of exploitation that can be handed to one Geothermal Permit holder is ten thousand (10,000) ha maximum. If working area of exploitation is required for more than 10,000 ha, then the holder shall obtain prior approval from the minister, governor or regent/mayor in accordance to their authorities by submitting written application on the working area plan, including the AMDAL revision and the installed capacity of geothermal development report.

374. If the Geothermal Permit holder did not implement any exploitation activity in latest two (2) years after the completion of exploration work, then the

Minister by his authority may revoke the Geothermal Permit. The Geothermal Permit principally might be terminated due to the following reasons:

- Completion of Geothermal Permit period;
- Return back the Geothermal Permit;
- Revocation of Geothermal Permit;
- Cancellation of Geothermal Permit.

375. Exploitation work shall be implemented by considering the aspects of environmental and geothermal resources conservation.

376. Time frame of the above staging for geothermal development is summarized below:

Table 3-5: Staging Activity and Time Frame of Geothermal Development

Staging & Related Regulation	Detailed Activities	Output	Time Frame
Preliminary Survey (MOEMR Regulation No. 2 Year 2009)	<ul style="list-style-type: none"> <li>• Preliminary investigation;</li> <li>• Sustainability;</li> <li>• Detail investigation.</li> </ul>	<ul style="list-style-type: none"> <li>• Speculative resources;</li> <li>• Hypothetic resources;</li> <li>• Expected reserves.</li> </ul>	One (1) year maximum.
Exploration (MOEMR Regulation No. 11/2009)	<ul style="list-style-type: none"> <li>• Drilling, exploration;</li> <li>• Pre-feasibility study;</li> <li>• Delineation drilling.</li> </ul>	<ul style="list-style-type: none"> <li>• Possible reverses;</li> <li>• Possible reverses;</li> <li>• Proved reserves.</li> </ul>	Five (5) years maximum.
Feasibility Study (MEMR Regulation No. 11/2009)	<ul style="list-style-type: none"> <li>• Feasibility Study</li> </ul>	<ul style="list-style-type: none"> <li>• Proved reversed is ready to develop</li> </ul>	AMDAL study might be implemented in four (4) – six (6) months, two (2) years maximum.
Exploitation and Utilization (MOEMR Regulation No. 11/2009)	Drilling, Development.		Thirty (30) years maximum, extendable for twenty (20) years.

377. Guidelines for Permit of Forestry Land Rent for mining development, including geothermal, are regulated in Minister of Forestry (MOFOR) Regulation No. P.38/Menhut-II/2012 in conjunction with MOFOR Regulation No. P.18/Menhut-II/2011. AMDAL approval is one of the requirements to be submitted for the application of the Forestry Land Rent Permit for Exploitation Works. While for survey and exploration work AMDAL is out of the requirements.

378. Minister of Forestry has issued Regulation No. P.16/Menhut-II/2014 regarding Guidelines on Forest Land Use on 10 March 2014, as the substitution to MOFOR Regulation No. P-14/Menhut-II/2013 in conjunction with MOFOR Regulation No. P.38/Menhut-II/2012 in conjunction with MOFOR Regulation No. P.18/Menhut-II/2011.

379. Comparison between the new MOFOR Regulation No. P.16/Menhut-II/2014 and the previous regulations which are stated as not valid since 10 March 2014 is listed the table below:

Table 3-6: Comparison between the New MOFOR Regulation No. P.16/Menhut-II/2014 and Previous Regulations

No.	MOFOR Regulation No. P.14/Menhut-II/2013 jo. P.38/Menhut-II/2012 jo. P.18/Menhut-II/2011	MOFOR Regulation No. P.16/Menhut-II/2014	Remarks
1.	Development activity out of any certain forest activity that directly or indirectly support forest management within Perum Perhutani area or outside Perhutani area that have Forest Management Unit ( <i>Kawasan Pengelolaan Hutan/KPH</i> ) is implementable via joint cooperation mechanism and becomes part of forest management.	Development activity out of any certain forest activity that directly or indirectly support forest management is implementable via joint cooperation scheme.	Enlargement of joint operation scheme.
2.	Limitation on the use of forest land area for mining activities is maximum: <ul style="list-style-type: none"> <li>- Ten percent (10%) of the effective area of the production forest area with forest use license;</li> <li>- Ten percent (10%) of the effective area of the production forest area without forest use license;</li> <li>- Ten percent (10%) of KPH in Perhutani area.</li> </ul>	Limitation on the use of forest land area for mining activities (survey or exploration; oil and gas and geothermal production operation) is not applied.	Limitation on the use of forest area for geothermal activities is deleted.
3.	IPPKH/ <i>Izin Pinjam Pakai Kawasan Hutan</i> (Forestry Land Rent Permit) for mining activities in production forest area with the Use Permit for Timber Forest Ecosystem Restoration in natural forest, and production forest that designated as buffer zone adjacent to protected and conservation forest, protected area, area with intensive silviculture system, shall not be granted.	IPPKH is not applied for mining activities in production forest area with Use Permit for Timber Forest Ecosystem Restoration in natural forest, and production forest that designated for buffer zone adjacent to protected and conservation forest, protected area, area with silviculture system, except for geothermal activities.	Limitation on using production forest for geothermal activities has been deleted.
4.	For survey and exploration activities, satellite image, environmental permit and	For survey and exploration activities, only satellite image that is not included as the	AMDAL requirement is deleted for survey and exploration since only UKL-

No.	MOFOR Regulation No. P.14/Menhut-II/2013 jo. P.38/Menhut-II/2012 jo. P.18/Menhut-II/2011	MOFOR Regulation No. P.16/Menhut-II/2014	Remarks
	AMDAL documents are not included as the requirements for IPPKH application.	requirement for IPPKH application to survey and exploration.	UPL is required for survey and exploration activities.
5.	Period for issuance of IPPKH Decree for Survey and Exploration is one hundred and forty (140) working days.	Period of issuance of IPPKH Decree for Survey and Exploration is ninety five (95) working days.	Period for IPPKH Decree for Survey and Exploration is shorter in new regulation.
6.	Period for issuance Principle Approval ( <i>Izin Prinsip</i> ) for IPPKH is ninety (90) working days.	Period for issuance Principle Approval for IPPKH is seventy five (75) working days.	Period for Principle Approval for IPPKH Decree is shorter in new regulation.
7.	Period for issuance IPPKH Decree for Exploitation Works since application submission that comply with all requirements and obligations after the issuance of <i>Izin Prinsip</i> is ninety (90) working days.	Period for issuance IPPKH Decree for Exploitation Works since application submission that comply with all requirements and obligations after the issuance of <i>Izin Prinsip</i> is sixty five (65) working days.	Period for Principle Approval for IPPKH Decree for Exploitation after the issuance of <i>Izin Prinsip</i> (application submission that comply with all requirements and obligations) is shorter in new regulation.

380. Before Law No. 2/2014 is stipulated, a Memorandum of Understanding between the Minister of Energy and Mineral Resources and Minister of Forestry No. 7662/05/ME.M.S/2011; No. NK.16/Menhut-II/2011 regarding the Acceleration of Geothermal Permits in the Production, Protection, and Conservation Forests has been made in accordance to Government Regulation No. 41/Menhut-II/2012 in conjunction with Government Regulation No. 32/Menhut-II/2010 and in 2011. It is aimed to accelerate the process of permits for geothermal development activities and to prepare the steps in order the geothermal activities can still be implemented in conservation forests by still considering the conservation principles. This Memorandum of Understanding is valid for three (3) years since the stipulated date and made while waiting for the amendment of Law No. 21/2014. There are twenty eight (28) geothermal development activities proposed in this Memorandum for acceleration in obtaining the permits related to the use of the forestry areas.

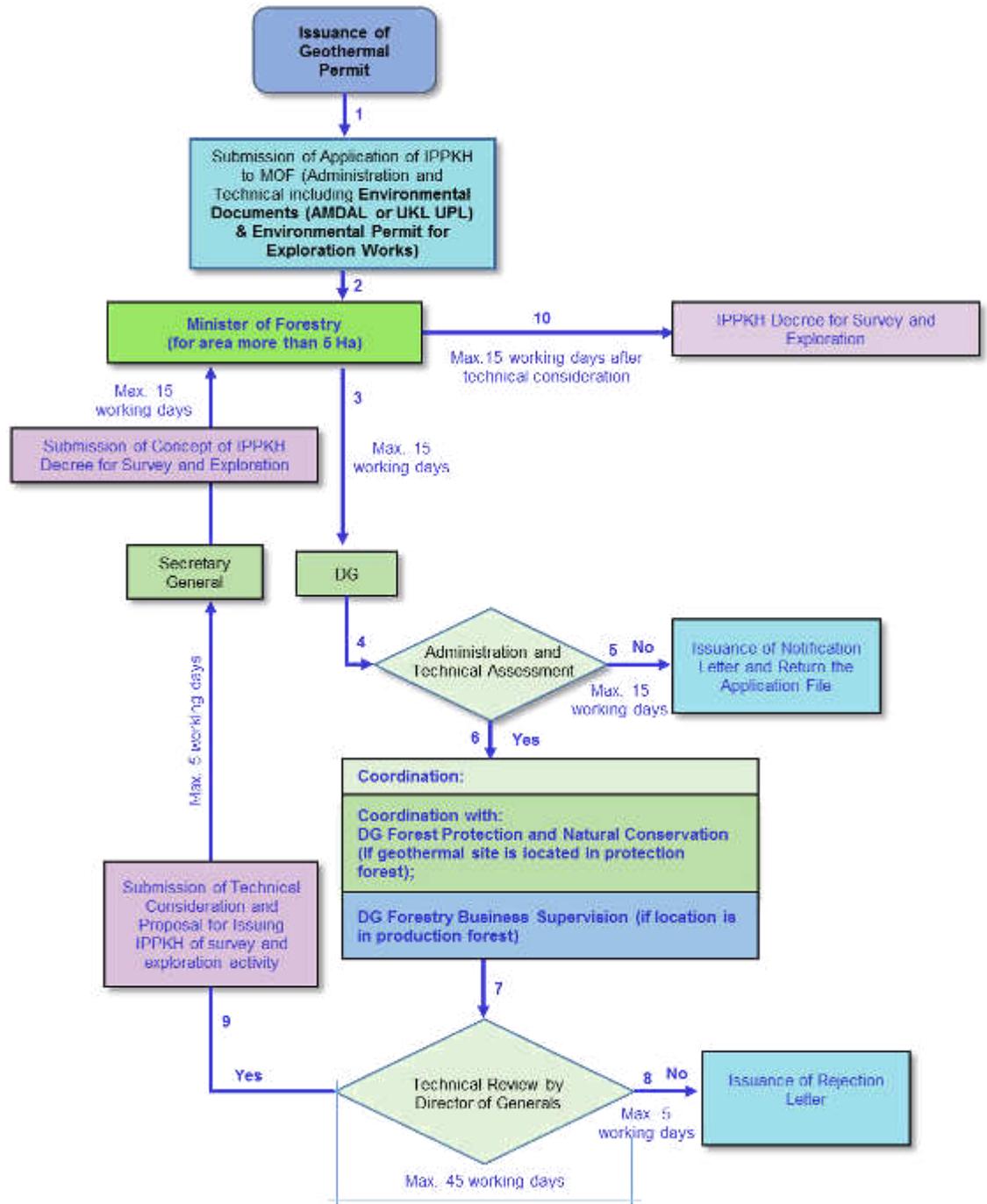
381. Law No. 21/2014 Article 5 regarding Geothermal states that geothermal activity for indirect use can be conducted in entire of Indonesia forest area, which is including production forest, protection forest, conservation forest, and sea area.

382. The regulation also mentioned that geothermal activity for indirect use that conducted in conservation forest shall have permit of use for environmental services. But detail regulation to set the procedure for this permit is not provided yet.

383. Government Regulation No. 28/2011 regarding the Management of Natural Sanctuary and Natural Conservation Areas allows the utilization of the

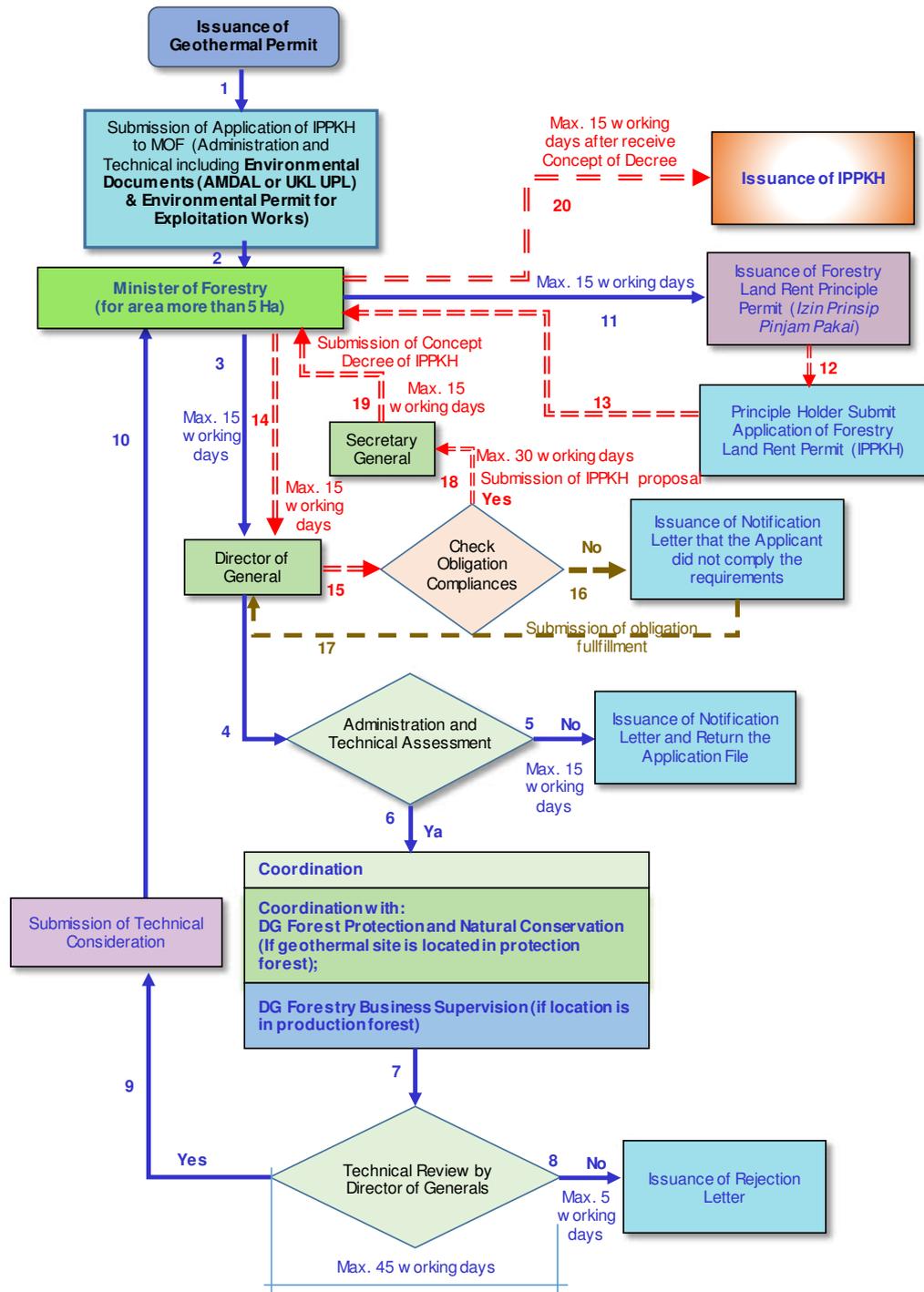
Natural Sanctuary Area (KSA) and Natural Conservation Area (KPA) for geothermal activities, except for the natural area. Natural preservation area shall used only for activities of research and development, education and improvement of natural conservation awareness, carbon sequestration and storage, and the utilization of genetic resources for supporting the cultivation.

384. The following figure shows the forestry land permit process in case it is required for the geothermal development.



Source: Permenhut No. 16/2014

Figure 3-10: Forestry Land Rent Permit (IPPKH) Procedures for Survey and Exploration Works (Area > 5 Ha)



Note:

- > Process of Issuance for Principle Permit of Forestry Land Rent
- > Process of Issuance for IPPKH Decree
- - - - -> Obligation is not comply

Source: Permenhut No. 16/2014

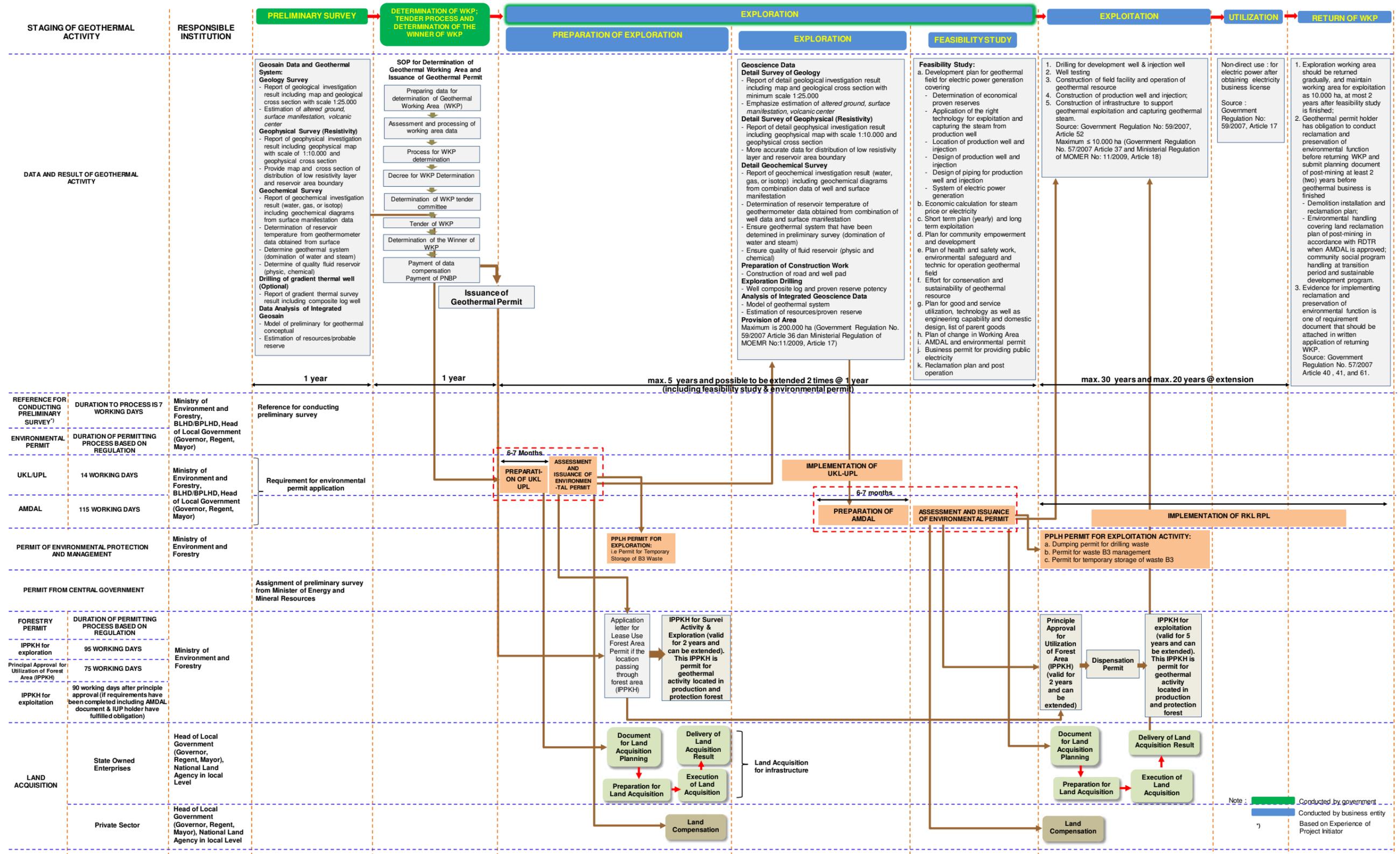
Figure 3-11: Forestry Land Rent Permit (IPPKH) Procedures for Exploitation Works with Area > 5 Ha

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385. In addition to the analysis of those related regulations, some discussions and interviews have been made with stakeholders for strengthening the analysis with proper timing to implement AMDAL Study, such as with Pertamina Geothermal Energy (PGE). The constraints at the implementation facing by the Project Proponent based on interview with are as follows:

- Many of exploitation works cannot be implemented due to are overlapping with conservation forest, which is prohibited for the mining activities, while on the other side Indonesia has the great potency of geothermal energy;
- One of the requirements for applying IPPKH is the approved AMDAL documents and environmental permit, while there is uncertainty of time consumed for AMDAL approval and issuance of environmental permit process. It takes quite long time after the submission of draft environmental documents for the invitation of ARC meeting (especially at central level). In other hand, there is an uncertainty of period for the issuance of environmental permit after the approval of AMDAL or obtained UKL-UPL mostly at province or district levels. Process of environmental permit issuance in some area has dissuaded the Project Proponent as well in applying IPPKH since it is not clearly specified.
- As one of the requirements for AMDAL approval, the proposed activity shall be according to the spatial planning. Land use plan prepared by the Districts and Provinces is sometimes different with the National spatial planning. There is a case that one area is stipulated as the production forest by the District Government, but as the protected forest by the Provincial Government.

386. In accordance to the above analysis for the coherence of AMDAL regulations and sectoral regulations of Minister of Energy and Mineral Resources regarding geothermal and the Minister of Forestry regulations on IPPKH related to geothermal activities and discussion with stakeholders, the Consultant tries to integrate the project cycle of each permitting process in the following figure. Currently, AMDAL process is prepared after the completion of feasibility study, however, due to the approved AMDAL document and environmental license is the requirements for obtaining IPPKH, it is recommended that AMDAL documents preparation is started in the Exploration stage after the results of drilling of at least one deep well constituted the potency of geothermal is feasible in the proposed area for exploitation.



Source: Modified Based on Discussion with PT. PGE and Chevron

Figure 3-12: Licensing and Project Cycle in Geothermal Sector

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## **Technical Guideline for AMDAL Implementation in Geothermal Activity**

387. Technical guideline is compiled for directing related parties in geothermal sector to obtain complete information of AMDAL implementation process and licensing in geothermal activity for the project cycle may run smoothly.

388. The guideline will provide following information:

- Screening in Geothermal Activity;
- Process for Environmental Document Preparation and Assessment as well as Issuance of SKKL and Environmental Permit;
- Staging in Geothermal Activity;
- Licensing in Geothermal Activity Stage;
- Environmental Management and Monitoring by Project Initiator in Geothermal Activity;
- Sample of Outline for ESIA Document of Geothermal Activity.

389. The complete technical guideline for integration of AMDAL implementation into geothermal project is shown in Appendix.

### **Recommendations**

390. Since to apply IPPKH for exploitation activities, besides AMDAL approval, environmental permit also as a requirement, then to eliminate uncertainty on the period for environmental permit issuance after AMDAL or UKL-UPL approval, it shall be further specified the required timeline in regulation for environmental permit issuance.

391. Since an AMDAL process need around two (2) to three (3) years for approval by practices, it is better to start AMDAL process directly from exploration period (after it is assumed feasible and data are quite informative in describing activity), does not have to wait for the completion of feasibility study.

392. There is no environmental permit either AMDAL or UKL UPL as well as SPPL required in conducting preliminary survey. Project proponent only requires reference from Ministry of Environment and Forestry or BLHD/BPLHD, as well as head of local government (governor, mayor, regent). This reference letter shall be processed within seven (7) working days.

393. In case detailed regulation that sets permit for utilization of environmental services have been issued, the technical guideline for integration of AMDAL into geothermal project shall be adjusted with new regulation.

### **3.4.3 Public Works Sector (Toll Road Development)**

394. In relevant to screening process in MOE Regulation No. 5/2012, it is stipulated that the process for toll road development has to state scale for land acquisition. The screening process has considered indirectly the social aspect in determining significant impact for social aspect on toll road development activity.

395. Toll road development in Indonesia has been accelerated since 2005. Therefore, Ministry of Public Works established the Toll Road Authority on June 29, 2005 as the toll road regulator in Indonesia. However, due to the limitation

of Government budget in financing the toll road, development then Government decided to develop the toll road through three schemes, i.e. private full-financing scheme, public-private partnership scheme, and government-funded-construction with private-funded for operation and maintenance scheme.

Table 3-7: Financing Alternatives for PPP Scheme

Project Feasibility	Land Acquisition & Construction	Construction	O&M	Cooperation Scheme
Economically viable, but not financially.	By Government	By Government	By Business Entity	Government-funded construction with private-funded for operation and maintenance (Hybrid Financing).
Economically viable, financially marginal.	By Government	By Business Entity	By Business Entity	Government support for land acquisition with private-funded for construction and operation and maintenance (PPP with Government Support).
Economically and Financially viable.	By Business Entity	By Business Entity	By Business Entity	Private Full Financing (Regular PPP).

396. The laws and regulations that support the acceleration of toll road development:

- Law No. 25/2004 regarding National Development Planning System;
- Law No. 38/2004 regarding Road;
- Law No. 25/2007 regarding Investment;
- Law No. 27/2008 regarding Spatial Planning;
- Law No. 32/2009 regarding Environmental Protection and Management;
- Law No. 2/2012 regarding Land Acquisition for Development for Public Interest;
- Government Regulation No. 15/2005 regarding Toll Road;
- Government Regulation No. 40/2006 regarding National Development Planning Arrangement System;
- Government Regulation No. 1/2008 regarding Government Investment;
- Government Regulation No. 26/2008 regarding National Spatial Planning;
- Government Regulation No. 24/2010 regarding Forestry Utilization;
- Government Regulation No. 27/2012 regarding Environmental License;

- 
- Government Regulation No. 43/2013 regarding The Second Amendment of Government Regulation No. 15/2005;
  - Presidential Regulation No. 67/2005 regarding Government Cooperation with Business Entities in Infrastructure Provision;
  - Presidential Regulation No. 56/2011 regarding The Second Amendment of Presidential Regulation No. 67/2005 regarding Government Cooperation with Business Entities in Infrastructure Provision;
  - Minister of National Development Planning/Head of National Development Planning Agency No. 3/2012 regarding General Guideline of Government Cooperation Implementation with Business Entities in Infrastructure Provision;
  - Minister of Environment Regulation No. 5/2012 regarding Various of Business and/or Activities that has AMDAL Mandatory;
  - Minister of Public Works Regulation No. 13/PRT/M/2010 regarding Toll Road Utilization Procurement Guideline;
  - Minister of Environment Regulation No. 16/2012 regarding Environmental Document Arrangement Guideline;
  - Minister of Environment Regulation No. 8/2013 regarding Environmental Document Inspection and Assessment Administration and Environmental License Issuance;
  - Minister of Forestry Regulation No. 16/2014 regarding Forestry Land Rent Permit.

397. The project cycle is commenced with the general planning of an activity or project plan, which is consisting of new road construction program or improvement of existing road. The Project Proponent has to identify the significant or negative impacts prediction that affected by the proposed activity or project.

398. There are three (3) schemes of toll road construction, operation, and management, such as:

- Constructed entirely by government, operation, and management by private sector;
- Constructed partly by government and partly by private sector, operation, and management by private sector;
- Constructed entirely by private sector (land provided by Government), managed by the private sector.

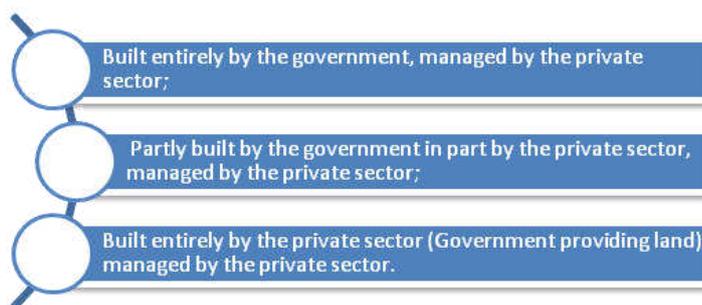


Figure 3-13: Toll Road Development Investment Scheme

399. BPJT has the following roles and functions:

- Recommend initial tariff and adjustments to the Minister;
- Take over the toll road at the end of concession period and provide recommendations for further management to Minister;
- Take over the toll road that have terminated concession agreement for re-tender;
- Conduct preparation of toll road concession that covers financial analysis, feasibility study and AMDAL preparation;
- Implement toll road investment via the transparent and open tender;
- Support implementation process for land acquisition with budget availability from the business entities and prepare its utilization mechanism;
- Monitor the implementation of toll road planning, construction, operation, and maintenance that carried out business entities;
- Supervise the business entities over the implementation of their entire obligations in accordance to the concession agreement and report periodically to the Minister.

#### 3.4.4 Public Private Partnership (PPP)

400. Public Private Partnership is a kind of cooperation between the Government and private parties in the provision of infrastructure. The cooperation includes the construction work, improvement management, and infrastructures maintenance in order to improve the quantity and quality of public services (*Bappenas, 2009*).

401. There are two (2) types of project proposals for Public Private Partnership (PPP), i.e. by government or solicited proposal and by the private or unsolicited proposal.

##### a. Solicited Proposal

402. For solicited proposals, the PPP project cycle consists of four (4) phases, namely planning, project preparation, transaction, and contract management. Figure 5.8 shows the interrelation between the four phases of the PPP projects cycle.

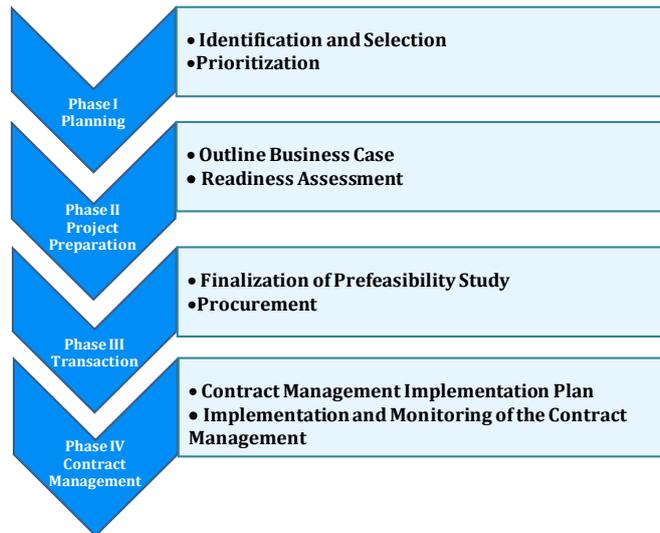
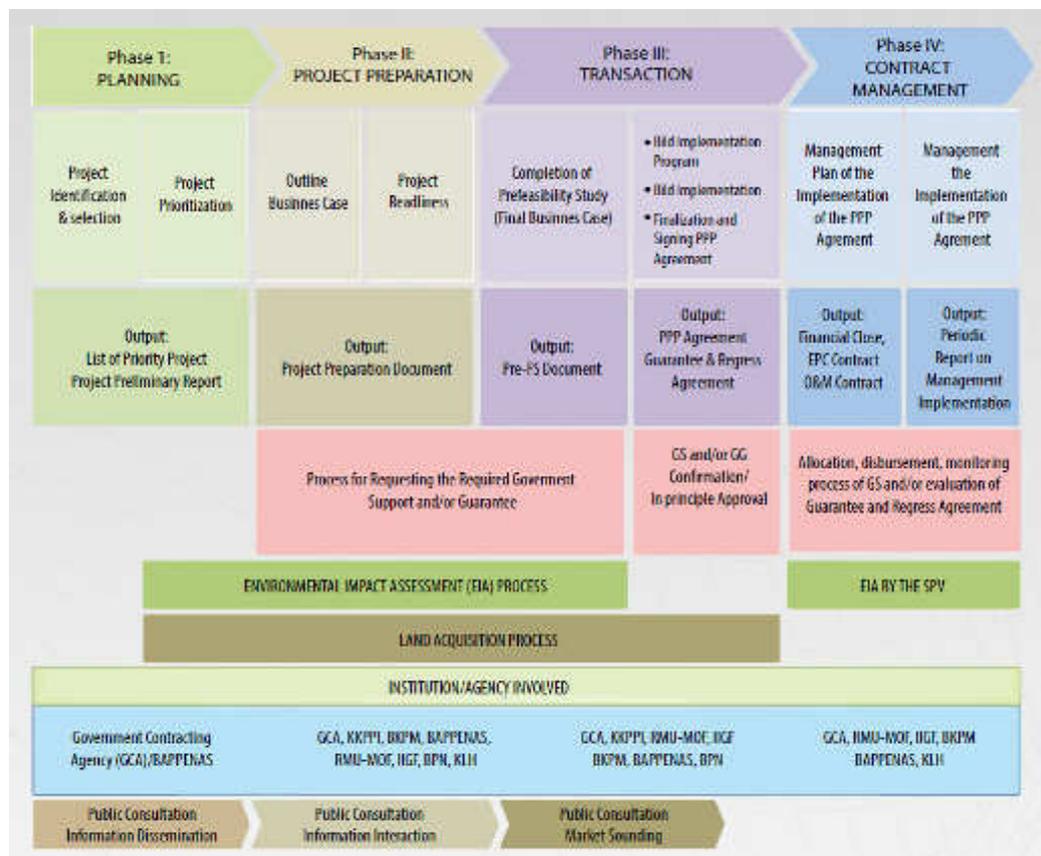


Figure 3-14: The Project Cycle for Solicited Proposal

403. The PPP project development cycle, as summarized in Figure 5.9 below, shows the overall configuration of the main activities, key processes of requesting government support, government guarantee, environmental impact assessment, and land acquisition processes in the phases of preparation, transaction of PPP project & contract management, including the involvement of various institutions in each phase of the project development.



Source: PPP Book 2013

Figure 3-15: PPP Project Development

## b. Unsolicited Proposals

404. The PPP project cycle for the solicited proposals consists of four (4) phases, namely planning, project preparation, transaction, and contract management. The following figure shows project cycle for PPP Solicited Project.

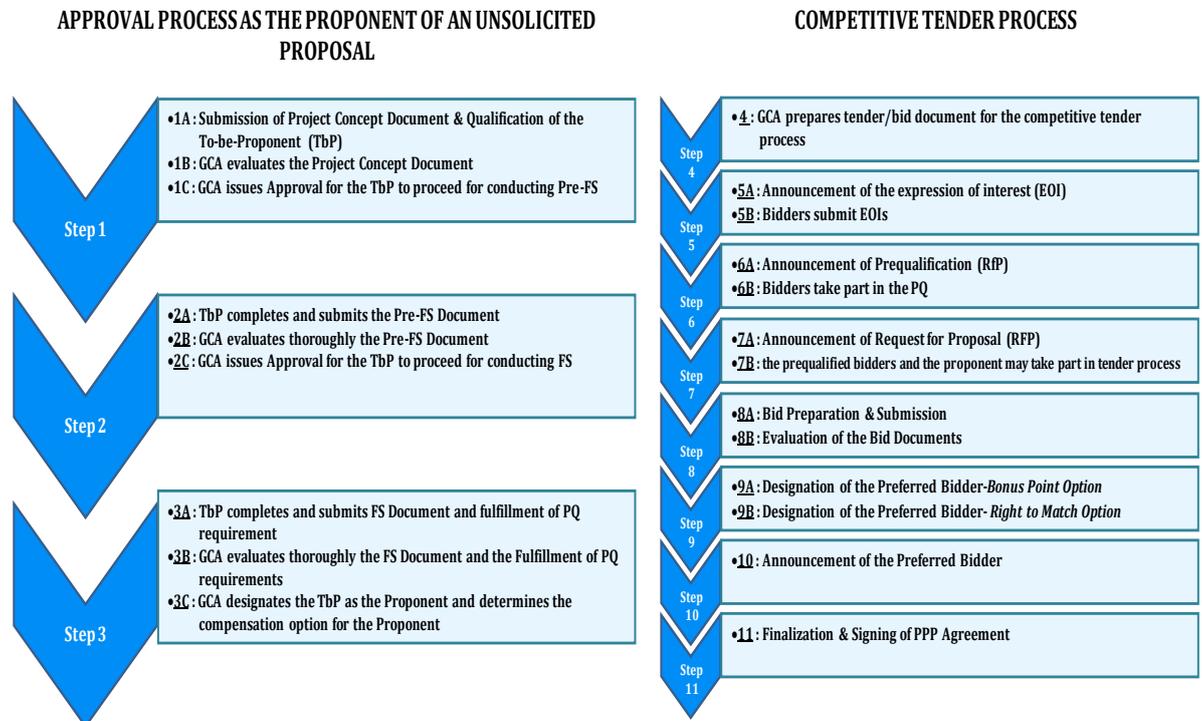


Figure 3-16: The Management Process of Unsolicited Proposals

## c. AMDAL Process in Implementation Phases of PPP Project

405. In accordance to PPP Book 2013, AMDAL process shall be prepared during the preparation process of Project Readiness Assessment at the stage II of Project Preparation. AMDAL documents for PPP project can be initiated by Government or by Private Sector that depends whether it is a solicited or unsolicited project. For unsolicited project, it is stated in Government Regulation No. 15/2005 regarding Toll Road that if AMDAL and feasibility study is prepared by the Project Proponent, then compensation shall be given to the Project Proponent in the form of value added when they participating in the tender of Business Entity or the purchase of intellectual property rights for the feasibility study and AMDAL.

406. Decree of Environmental Feasibility (*Surat Keputusan Kelayakan Lingkungan Hidup/SKKLH*) & Environmental is stated as a requirement to implement procurement bidding by Business Entity. Therefore, AMDAL shall be prepared during the Project Readiness Assessment, earliest after the financial analysis and determination of toll road section development priority.

407. In accordance to Government Regulation No. 15/2005 Article 25 regarding Toll Road, it is stated that outputs of feasibility study and AMDAL shall be the basic in the bidding process of Business Entity for Toll Road Concession.

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408. From the results of discussions with BPJT, it is constituted that based on their past experiences many of AMDAL documents were prepared after DED. Consequently the impacts and mitigation measures that have been estimated and planned in AMDAL document cannot be integratedly accommodated in the project Detailed Engineering Design (DED). Therefore, many complaints from the community during the implementations since those mitigations measures proposed by AMDAL documents cannot be integratedly applied since the DED has been finalized.

409. Currently, monitoring of the implementation of RKL and RPL for fifty two (52) toll road segment is implemented by BPJT since AMDAL document is prepared by BPJT/Directorate of Engineering Affairs of Ministry of Public Works. In the future, BPJT will encourage the business entities to prepare AMDAL document for they may monitor the implementation of RKL and RPL by themselves.

410. In addition, if toll road PPP development project requires forestry land rent permit (IPPKH), then AMDAL and environmental permit required as well. Therefore, the approved AMDAL documents and environmental permit is becoming one of the important documents in PPP scheme.

411. Constraints in Toll Road Development through PPP Scheme that concluded based on the results of discussion with stakeholders are as following:

- There is uncertainty of time required for AMDAL approval process, while AMDAL documents and environmental permit is required to be completed before the bidding process;
- The process of IPPKH requires approved AMDAL document and environmental permit will be submitted with the application for IPPKH. Therefore, it needs a certain timeline for AMDAL approval and issuance of environmental permit;
- Although it is not related to project cycle, the stakeholders also found that the quality of AMDAL documents especially in toll road is relatively low and only few AMDAL consultant/Firms that are categorized as qualified Consultant for toll road development. Usually if the toll road development is financed by Donors, there will be additional documents required by Donors to be prepared since the content (depth) of AMDAL documents did not fulfill the Donors' requirements;
- Since the requirements for AMDAL Compiler is only based on the availability of the competency, while total of the certified AMDAL Consultant is limited, it is required comprehensive method on how to improve the quantity and quality of AMDAL Consultant.

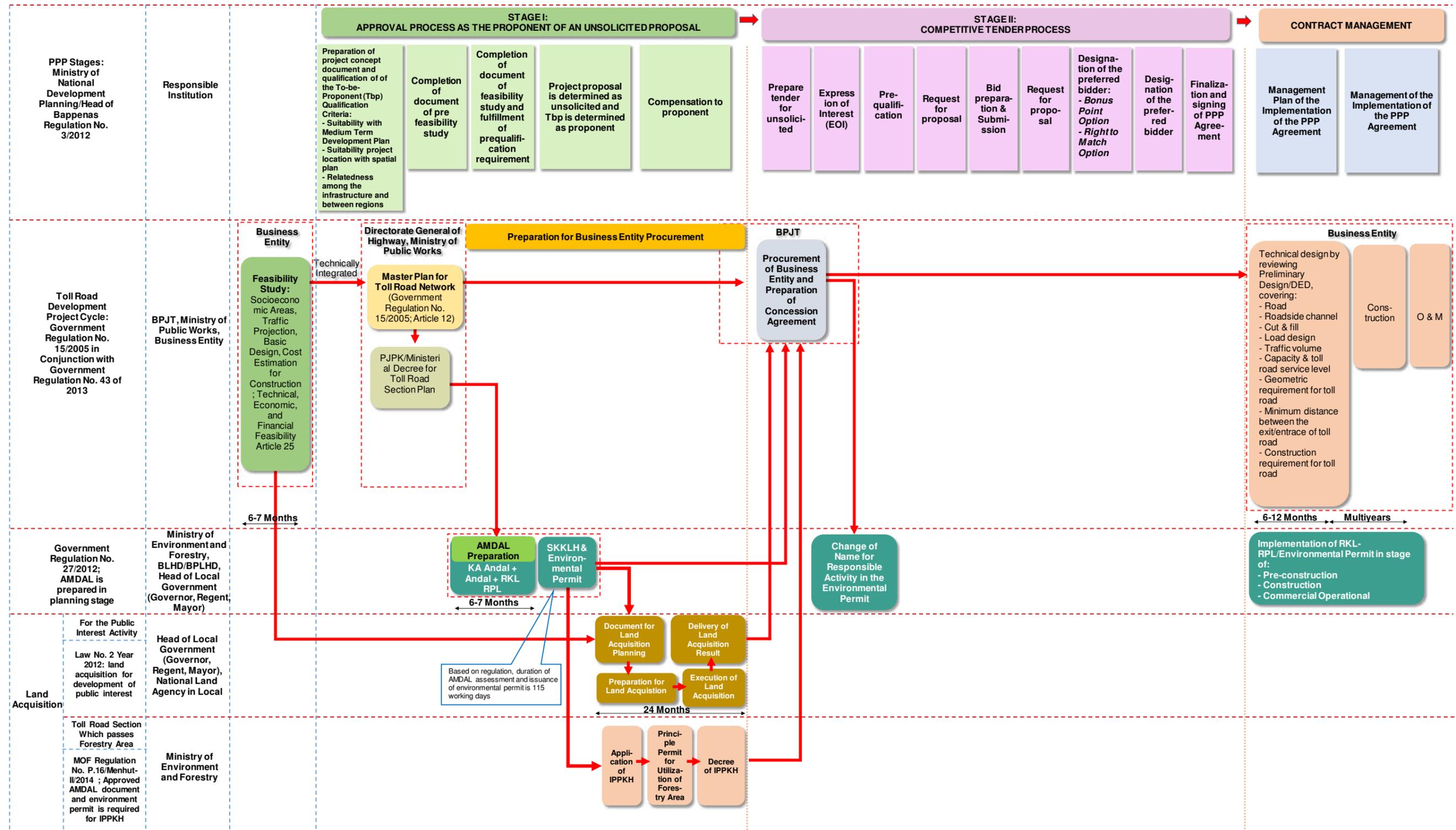
412. Based on the above analysis for the coherence of the AMDAL regulations and sectoral regulations of Minister of Ministry of Public Works regarding Toll Road, State Minister of National Development Planning/Head of Bappenas and Ministry of Forestry regulations on IPPKH related to toll road development activities and discussion with stakeholders, the Consultant tries to integrate the project cycle of each permitting process in the following figure. Currently, many of AMDAL documents are prepared after the completion of DED, however, due to the importance to include the mitigations activities recommended by AMDAL documents, it is better that AMDAL documents is prepared before the bidding is implemented and DED is completed. And due to

the requirements of bidding for business entity that AMDAL documents and environmental permit/license to be attached, it is recommended that AMDAL is prepared in the cycle of Stage II: Preparation Stage in toll road development project with PPP scheme for Solicited Proposal. Meanwhile for unsolicited proposal, AMDAL document should be prepared in stage of completion of feasibility document and fulfillment of pre-qualification requirement.

413. In relevance to land acquisition for toll road development project with PPP scheme, Presidential Regulation No. 56/2011 states that land acquisition should be conducted before submission of tender document. Detail process for implementation of AMDAL in toll road development project for solicited and unsolicited proposal is shown in the following figure.

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Source: Modified Based on Discussion with BPJT and Bappenas

Figure 3-18: AMDAL Process in PPP Project for Unsolicited Proposal

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## **Technical Guideline for AMDAL Implementation in Toll Road Development**

414. The objective of the guideline is to give guidance to involved parties in toll road development for processing permit of toll road development and facilitating project initiator to prepare environmental document.

415. The guideline give the following information:

- Screening in Toll Road Development;
- Process for Environmental Document Preparation and Assessment also Issuance of SKKL and Environmental Permit;
- Implementation of PPP Scheme in Toll Road Development;
- Staging in Toll Road Development and Licensing;
- Environmental Management and Monitoring that shall be done by Project Initiator in Toll Road Development;
- Sample of Outline for ESIA Document of Toll Road Development.

416. The technical guideline for integration of AMDAL implementation into toll road development is shown in Appendix.

### **Recommendations**

417. Generally, preparation of AMDAL document is recommended to prepare after preliminary design for the indicated potential impacts may be predicted and mitigation measures may be accommodated in the final design and in document of land acquisition plan.

418. In solicited proposal, AMDAL preparation can be started in the project preparation in stage II, and after the project prioritization that exactly has been stipulated by Government.

419. In unsolicited proposal, AMDAL preparation can be started in stage completion of feasibility document and fulfillment of pre-qualification requirement.

420. After procurement process for business entity, the winner should process change of name for responsible activity in the environmental permit.

421. In case there is some amendment of regulation related with land acquisition for toll development project with PPP scheme, this technical guideline shall be adjusted with new regulation.



# **CHAPTER 4**

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## CHAPTER 4 IMPROVEMENT OF CERTIFICATION PROCEDURES AND TRAINING OF AMDAL CONSULTANT (OUTPUT 3)

### 4.1 Introduction

422. The EIA system in Indonesia that known as *Analisis Mengenai Dampak Lingkungan* or AMDAL has established in 1982. It has been amended as well for several times and the last amendment is Government Regulation No. 27/2012 regarding Environmental Permission as the derivative of the Law No. 32/2009 regarding Environmental Protection and Management, which simplifies AMDAL procedures and provides a stronger legal basis for enforcement of AMDAL implementation. However, several issues still found along AMDAL process. For example, the low quality of AMDAL document due to low capacity of AMDAL implementers such as AMDAL compiler, certification system, etc.

423. Improvement of AMDAL quality and effectiveness needs broad stakeholders' concerns. Since the issuance of Law No. 32/2009, Indonesia applies certification and accreditation system for individual consultant, AMDAL consultant firm and AMDAL training institutions (*LPKA/Lembaga Pelatihan Kursus AMDAL*) to improve the capacity of AMDAL Consultant. Ministry of Environment has awarded INTAKINDO (*Ikatan Nasional Tenaga Ahli Konsultan Indonesia*) as the institution for certification of AMDAL Competency (*LSK/Lembaga Sertifikasi Kompetensi AMDAL*) through tender process.

424. Minister of Environment and Forestry (MOEFOR) considered that strengthening the capacity of AMDAL consultant is needed by refining the certification system and the possibility to introduce the best specialized or the advanced competencies system. Currently, the AMDAL consultant certification system in Indonesia only recognizes one competency category, although there is a challenge to consider certification specialization on sectors and/or ecology based in the future. It is expected that the improvement of certification systems for AMDAL Consultant improvement can be accommodated in the ten-years road map plan for capacity development of AMDAL consultant.

425. Strengthening of AMDAL Consultant in regards to the certification system shall relate to the improvement of the Applicant (Individual Consultant) capacity, improvement of LPKA as the training institutions and LSK as the certification institution that are regulated under Ministry of Environment. The following figure shows the connection between those parties in the process of certification.

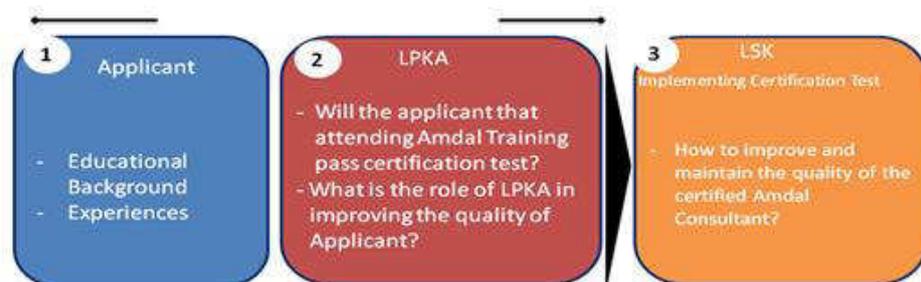


Figure 4-1: Certification System of Related Parties

426. In preparing report, the study team has conducted meeting and discussion with related stakeholders such as Assistant Deputy for Environmental Impact Assessment and Standardization & Technology of MOEFOR, Pusdiklat of MOEFOR, some Regional Environmental Offices (at provincial level: DKI Jakarta, Banten and West Java; at district level: Bogor Regency and Tangerang Selatan City), two (2) project proponents (Pertamina Geothermal Energy/PGE and *Badan Pengelola Jalan Tol/BPJT* of Toll Road); some LPKAs (*Pusat Penelitian Sumberdaya Manusia dan Lingkungan Universitas Indonesia/PPSML UI*, *Lembaga Pelatihan dan Pengkajian Lingkungan Perairan & Perikanan Sekolah Tinggi Perikanan/LP2LPK STP* and *Pusat Penelitian Lingkungan Hidup Institut Pertanian Bogor/PPLH IPB*), fourteen (14) Certified Individual AMDAL Consultant (CIACs), LSK INTAKINDO, and six (6) AMDAL consultant Firm (*Lembaga Penyedia Jasa Penyusun AMDAL/LPJPs*).

#### **4.2 Legal Basis Related to Certification Procedures and Training of AMDAL Consultant**

427. The regulations related to certification procedures and training of AMDAL consultant are:

*(1) Law No. 32/2009 regarding Environmental Safeguard and Management.*

428. Every activity/project affecting significant impact to environment shall have AMDAL document (Article 22). AMDAL document is the basis for setting environmental feasibility decision (Article 24). Project Proponent (PP) shall prepare AMDAL document (Article 26). The PP can ask AMDAL compiler to prepare AMDAL document. The AMDAL compiler shall have AMDAL competency certificate, the MOE appoints Competency Certificate Institution (LSK) for issuing the certificate (Article 28).

*(2) Government Regulation No. 27/2012 regarding Environmental Permit.*

429. The PP shall prepare AMDAL document and may appoint Certified Individual AMDAL Consultant (CIAC) or AMDAL Consultant Firm (LPJP) to carry out the AMDAL preparation (Article 10).

430. An AMDAL compiler shall have a competency certificate issued by LSK. To obtain the AMDAL compiler competency certificate, an applicant shall participate and pass the test on AMDAL training as implemented by AMDAL Training Institution/LPKA (Article 11).

*(3) Ministry of Environment Regulation No. 06/2006 regarding General Guideline of Standardization for Personnel and Environmental Services Institution Competency.*

431. Standard of personnel and environmental services institutions competency consists of: (1). Indonesia Standard (*Standar Nasional Indonesia/SNI*) issued by the National Standardization Agency (*Badan Standardisasi Nasional/BSN*); (2). Indonesia National Working Competency Standard System (*Standardisasi Kompetensi Kerja Nasional Indonesia/SKKNI*) issued by the Professional Certification National Agency (*Badan Nasional Kompetensi Profesi/BNSP*); and (3). Standard and Indonesia Environmental

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Competency Registration System (*Sistem Registrasi Kompetensi Lingkungan Indonesia/SRKLI*).

432. SNI system is applied for environmental services institutions related to SNI application on environmental section, whereas SKKNI system is applied for professional base competency personnel on environmental section, then SRKLI system is applied for competency standard on application of regulations on environmental section (Article 4).

433. Technical Committee will be established for formation of standard of personal and environmental services institutions competency. Secretary of the committee is located in MOEFOR (Article 5).

*(4) Ministry of Environment Regulation No. 07/2010 regarding Competency Certification of AMDAL Document Compiler and Requirement of AMDAL Document Compiler Training Institution.*

434. AMDAL document shall be prepared by the PP. AMDAL compiler shall have a competency certificate in preparing AMDAL document. LPJP that prepares AMDAL document shall be registered (Article 2). Requirement of LPJP registration is illustrated in Article 3.

435. Competency certification for AMDAL compiler consists of competency test and certificate issuing activities. Competency certification activities are carried out by the LSK which is appointed by MOEFOR (Article 6). This regulation has included competency material for member and team leader of the AMDAL compiling team (*Anggota Tim Penyusun AMDAL/ATPA and Ketua Tim Penyusun AMDAL/KTPA*).

436. AMDAL training is implemented by accredited AMDAL Training Institution (LPKA). The curriculum of AMDAL training is articulated in MOER (Article 10).

437. AMDAL consultant firm (LPJP) shall be registered in MOEFOR. Requirement of LPJP registration is regulated in Article 12.

*(5) Ministry of Environment Regulation No. 20/2012 regarding General Guideline for the Implementation of Education and/or Training on Environmental Safeguard and Management.*

438. This regulation articulates implementation of education and training on environmental safeguard and management from view points of (1). implementing institution in Article 4; (2). demand analysis for training in article 6; (3). kinds and level of training in Article 8; (4). training participants in Article 9; (5). training curriculum and method in Article 10; (6). training lectures in Article 14; (7). training utility and facility in Article 15; (8) training implementation institution in Article 16; (9). certification in Article 17.

*(6) Ministry of Environment Regulation No. 21/2012 regarding Accreditation of Executing Institution on Education and/or Training on Environmental Safeguards.*

439. This regulation articulates accreditation of institutions implementing training in environmental section. The requirement of accreditation is in Article

4. The accreditation is carried out by an accreditation team appointed by MOEFOR Article 10. Accreditation procedure is in Article 14.

*(7) Ministry of Environment Regulation No. 65/2012 regarding Appointment of Indonesian Consultant Expert Association (INTAKINDO) as Competency Certification Institution for AMDAL Document Compiler.*

440. This regulation has appointed INTAKINDO as Competency Certification Institution (LSK).

*(8) Ministry of Environment Regulation No. 22/2009 regarding Procedures of Environmental Competency Registration.*

441. Every environmental services institution and training institution are compulsory to be registered in MOE (Article 2). The registration includes registration application, verification and issuing registration letter (Article 3).

442. The Minister of MOEFOR will issue registration decision in sixty (60) working days based on verification of application (Article 6).

*(9) Decree of Head of Environmental Education and Training Center (PUSDIKLAT-LH) No. Kep-11/Pusdiklat/LH/11/2012 regarding Guidelines of AMDAL Education and/or Training Implementation.*

443. This decree includes curriculum material for basic AMDAL training, AMDAL compiling training and AMDAL reviewing training.

*(10) Draft revision of Ministry of Environment Regulation No. 07/2010 regarding Standard and Competency Certification for AMDAL compiler.*

### **4.3. Procedures of AMDAL Consultant Certification System Based on Regulations**

444. Certification and accreditation system is aimed to control quality and accountability of the AMDAL Consultant (personnel and firm) and LPKA as well as to reach effectiveness and efficiency in implementation of environmental management for stakeholders.

445. The MOER No. 6/2006 regarding General Guidelines for Competency Standardization of Personnel and Environmental Services Institutions, regulated about the standard, committee for formulation competency standards, registration system, supervision on the implementation of a competency standard and monitoring and evaluation of the certification institution and training institutions.

446. The Environmental Law No. 32/2009 has mandated to regulate competency for AMDAL Consultant and AMDAL training institutions. The procedures for the certification system of Competency Certification for AMDAL consultant and Requirement of AMDAL Competency Training Institutions Consultant is regulated in MOER No. 7/2010 that now has been revising. The following figure explains the certification procedures of the Individual AMDAL Consultant in MOER No. 7/2010 and its revision draft.

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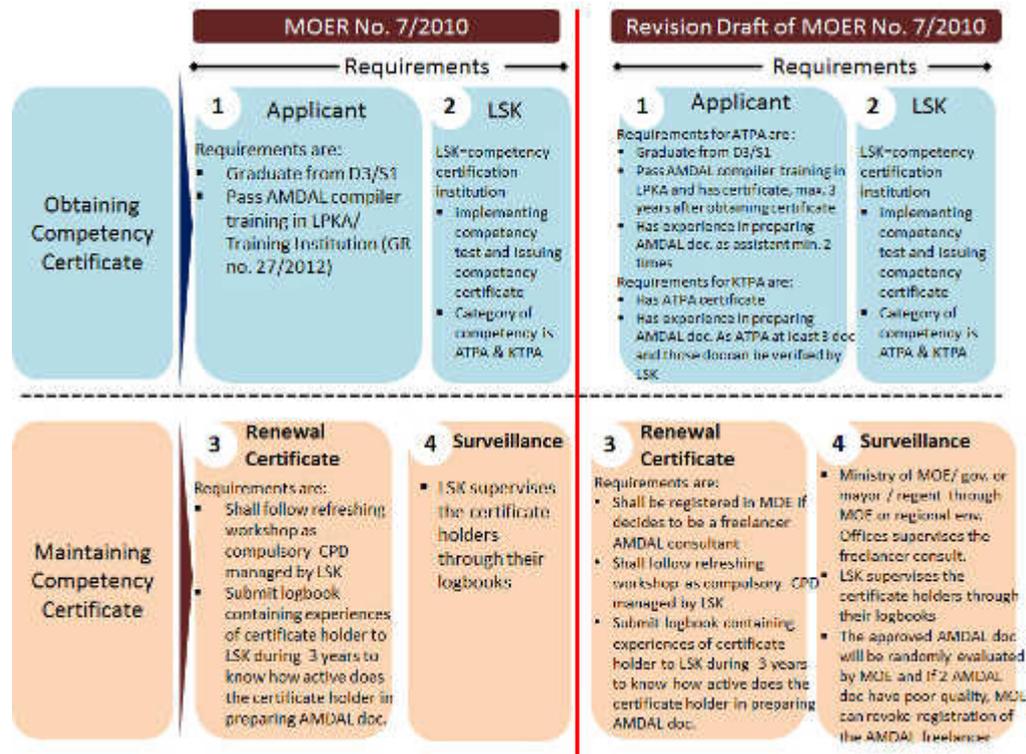


Figure 4-2: Procedure of Competency Certification of Individual AMDAL Consultant

### Obtaining Competency Certificate

447. As shown in the figure above, the requirements for obtaining a competency certificate, the applicant shall have: (1). bachelor degree (S1) or diploma (D3); (2). basic AMDAL and compiling AMDAL certificates from AMDAL training institution (LPKA) and/or have experience in assisting AMDAL compiling preparation; and (3). passed a competency test carried out by the Competency Certificate Institution (LSK). There two (2) types of competency tests, namely competency test for AMDAL member (ATPA) and team leader for AMDAL compiling (KTPA).

448. In the revision draft of MOER No. 7/2010, requirements of obtaining the competency certificate are different with MOER No. 7/2010, such as 1). to obtain ATPA certificate, an applicant shall have experiences as assistant in preparation of AMDAL document at least two (2) times; and 2). to obtain KTPA certificate, an applicant shall have ATPA certificate and experience as ATPA certificate holder in preparing AMDAL document at least three (3) documents.

### Maintaining Competency Certificate

449. The Certified Individual AMDAL Consultant (CIAC) is allowed to join with the AMDAL consultant firm (LPJP) or can be a freelancer as individual consultant in preparing AMDAL document. If CIAC decides to be a freelancer, s/he shall be registered in MOEFOR. The competency certificate validity is maximum for three (3) years and extendable.

450. LSK supervises CIACs through logbook containing activities of the CIACs in preparing AMDAL document. As for the registered freelancer CIACs,

MOEFOR will supervise them, for the extension of freelancer registration MOEFOR will randomly evaluate the approved AMDAL documents compiled by the freelancer CIACs and if two (2) documents are poor quality, the registration of freelancer CIACs will be suspended or revoked.

451. Reporting, AMDAL/EIA Consultant Firm (LPJP) and KTPA as freelancer CIAC shall report every AMDAL document compiling to MOEFOR at least fourteen (14) days after: 1) .signs contract with the project proponent; 2). issues environmental permit by the authorized officers; and 3). working contract is terminated.

452. A CIAC can only compile AMDAL document maximum three (3) documents at the same time (parallel).

### 4.3.1 AMDAL Training Institutions (LPKA)

#### Roles of LPKA

453. The LPKA is an accredited institution that has the facilities and infrastructure to implement AMDAL training, in accordance to the requirements of the MOER No. 21/2012 and registered in MOEFOR. The AMDAL training is a training for AMDAL compiler and reviewer.

454. Curriculum of AMDAL training to be implemented by LPKA based on Decree of Head of Pusdiklat LH No. Kep-11/Pusdiklat/LH/2012 is consisting of basic AMDAL, AMDAL compiling and AMDAL review curriculums.

455. Since 1982 AMDAL has been required for activities or industries or infrastructures development that have significant impact. AMDAL consultants had to take the training of AMDAL compiler. LPKAs usually are organizations attached to universities. Image of LPKAs' quality and capacity is usually attached as well to the image and quality of its university. The cooperation between the University (LPKA) and KLH had been implemented since early 80s.

456. The LPKA accreditation requirements are mentioned in MOER No. 21/2012 as follows:

- |     |                 |  |
|-----|-----------------|--|
| (a) | Legal status    | <p>The LPKA has task and function in education and/or training sector. The owner of LPKA might be:</p> <ul style="list-style-type: none"> <li>- Central government or local government;</li> <li>- Partly owned by private as confirmed by legal document;</li> <li>- University as established by Rector Decree.</li> </ul>   |
| (b) | Human resources | <ul style="list-style-type: none"> <li>- LPKA consists of managers and lecturers;</li> <li>- The LPKA Management shall have management of training certificate and training officer course or equivalent;</li> <li>- The lecturers shall have a training certificate in accordance with the specialty, have minimum experience of five (5) years in related field with his/her lecturing materials, and have a competency certificate in the field of his/her lecturing material.</li> </ul> |

- |                             |   |
|-----------------------------|---|
| (c) Training program        | The training programs shall be accredited including curriculum, training material, method, duration of training implementation, training participation, and training guideline. |
| (d) Training utility        | The LPKA shall have learning tools  |
| (e) Training infrastructure | The LPKA shall have training infrastructure such as class rooms, library, dining room, worship room, and office.  |

457. The accreditation of LPKA will be categorized into A, B, and C. The validity of accreditation certificate of LPKA is five (5) years for category A, three (3) years for category B and two (2) years for category C.

458. Responsibility of MOEFOR to LPKA: (1) provide guidelines, regulations and training curriculums; (2) provide training, seminars and workshops for lecturers; (3) provide information of requirement and compulsory of LPKA accreditation; and (4) control the quality management system of AMDAL training implementation.

### Accreditation of LPKA

459. MOER No. 21/2012 regarding Implementation of Accreditation of Training Institution regulates the accreditation assessment of the AMDAL training institution.

### Curriculum of LPKA

460. The LPKA shall follow curriculum provided by MOEFOR. The curriculum of AMDAL training had been revised several times as in the period before 2004, within 2004-2012 and the latest in 2012 through Decree of Head of Environmental Training Center (*Kepka Pusdiklat LH*) No. Kep-11/Pusdiklat/LH/2012.

461. The curriculum in Kep-11/Pusdiklat/LH/2012 is divided into three (3) categories, namely curriculum for basic AMDAL, AMDAL compiler and AMDAL reviewer. The courses in each curriculum describes as follow:

Basic AMDAL training subjects	AMDAL Compiler training subjects	AMDAL Reviewer training subjects
1. Brief explanation of Training.	1. General.	1. General.
2. EIA Definition, Process, and Benefit.	2. Type of activities and its impacts.	3. Screening, determine AMDAL reviewing authority and issuing environmental permit.
3. Introduction of Identification, Estimation, Evaluation, and mitigation of Environmental Impact.	3. AMDAL related regulations.	
		4. Screening and scoping.
4. Policies on Environmental Management and	5. Method for data collection and analysis.	5. AMDAL reviewing and application of environmental permit.

Basic AMDAL training subjects	AMDAL Compiler training subjects	AMDAL Reviewer training subjects
protection and Water Resources Management related to EIA.	6. Impact estimation method.	6. Determination of environmental feasibility and unfeasibility.
5. Process of EIA compiling, assessment and obtaining environmental permit.	7. Holistical evaluation method for env. Impact.	8. Compile draft of AMDAL reviewing and environmental permit decisions.
6. Surveillance and law Enforcement	8. Compile impact analysis (AMDAL) document	9. AMDAL information system.
7. Code of conduct for EIA compiler and assessor	9. Manage and monitor environmental impact	10. Implementation of AMDAL reviewing.
8. Introduction of EIA Information System	10. Code of conduct	11. Simulation of AMDAL reviewing.
9. Evaluation	11. Field practice	13. Code of conduct.
	12. AMDAL document compiling	14. Final evaluation
	13. Presentation AMDAL document	
	14. Final evaluation	

#### 4.3.2 Competency Certification Institutions (LSK)

462. Tasks of INTAKINDO are as following: (1). arrange requirement of assessors for the certification test; (2) carry out certification tests; (3) assess the result of certification test; (4) provide information to the public concerning scheduling of certification test and the certified AMDAL consultant who has been certified; (5) supervise the certified AMDAL consultants; (6) handle the grievances; and (7) carry out internal evaluation related to the implementation of certification.

463. Authorities of LSK: (1). determine materials for certification test; (2) define fee of certification with prior approval of the MOEFOR; (3) determine requirement of venue for certification test; (4) determine venue for the certification test; (5) issues the competency certificate for AMDAL compiler; (6) defines supervision system for the certified individual AMDAL consultant/compiler; (7) determine provisions on termination of competency certificate; and (8) suspend and revoke the competency certificate.

464. The LSK shall ensure the certification tests implemented transparently, objectively, adhere the rules and ensuring the validity of the issued competency certificate. The LSK shall regularly submit the implementation of the certification report to the MOED deputy in-charge for standardization.

465. INTAKINDO has adopted ISO 9001 and ISO 17204 in implementing the certification process to ensure the quality system. These ISOs are formulated into guidelines, procedures (main and supporting) and the working plan. The main procedure includes assessor recruitment, applicant requirements, security of test materials, certification evaluation, certificating, certification maintenance and surveillance, certificate extension, and certification suspension and revocation. Supporting procedures are on document control, recording maintenance and destroying, appeal and grievance handling, internal audit, confidential procedure, prevent conflict of interest, management review and corrective and preventive actions.

### Category and Requirement of AMDAL Compiler Competency Test

466. AMDAL competency certificate is classified into two (2) categories, namely (1). AMDAL compiling team member (ATPA); and (2). Team Leader of AMDAL compiling team (KTPA). The applicable requirements refer to Ministry of Environmental Regulation No. 7/2010, though it is under the process of revision. The applicable requirements shall be discussed and get approval from Deputy VII (Assistant Deputy of Standardization and Technology) of MOEFOR.

467. There are four (4) criteria to be allowed to participate in ATPA and two (2) criteria for KTPA certification test. The applicant may select one out of those four criteria for ATPA and the two criteria of KTPA. The requirement criteria to ATPA and KTPA are described below.

Table 4-1: Requirements for ATPA and KTPA Certification Test

Qualification	Criteria	Requirements
ATPA (member)	1 or	1) Education : Minimum Diploma D3 or equivalent; 2) Training : has attended AMDAL document compiling training (AMDAL B) or equivalent; 3) Experience : - 4) Language : Indonesia : excellent/fluent in both spoken and written.
	2 or	1) Education : Minimum Diploma D3 or equivalent; 2) Training : - 3) Experience : has experience in AMDAL document compiling of a minimum of five (5) documents as a team member without any competency certificate; 4) Language : Indonesia : excellent/fluent in both spoken and written.
	3 or	1) Education : Minimum Diploma D3 or equivalent; 2) Training : - 3) Experience : has experience in evaluating a minimum of fifteen (15) AMDAL documents; 4) Language : Indonesia : excellent/fluent in both spoken and written.
	4 or	1) Education : a minimum of Diploma D3 or equivalent and has the education background in environmental field with a minimum AMDAL course of three (3) credits; 2) Training : - 3) Experience : - 4) Language : Indonesia : excellent/fluent in both spoken and written.
KTPA (Team Leader)	1 or	1) Education : S1 or equivalent; 2) Training : - 3) Experience : has experience in compiling a minimum of five (5) AMDAL documents; 4) Language : Indonesia : excellent/fluent in both spoken and written.
	2 or	1) Education : S1 or equivalent; 2) Training : - 3) Experience : has experience in compiling a minimum of five (5) AMDAL documents. 4) Language : Indonesia : excellent/fluent in both spoken and written.

468. As in draft revision of MOER No. 7/2010, requirements for obtaining ATPA and KTPA competency certificate are as follows:

Table 4-2: Requirements for ATPA and KTPA Competency Certification Based on Draft Revision of MOER No. 7/2010 in 2014

For Obtaining ATPA Certificate	For Obtaining KTPA Certificate
<ol style="list-style-type: none"> <li>1. Pass AMDAL training and has AMDAL training certificate maximum three (3) years after issuance; and</li> <li>2. Has experience two (2) times as assistant in preparing AMDAL document and the document can be verified by LSK.</li> </ol>	<ol style="list-style-type: none"> <li>1. Has ATPA competency certificate;</li> <li>2. Has experience in preparing AMDAL document as ATPA at least three (3) AMDAL documents.</li> </ol>

469. LSK INTAKINDO has not issue detail requirements of competency certificate for applicant based on the new revision of MOER No. 7/2010.

### Competency Test Material

470. The assessment of ATPA in the competency certification shall focus on the following:

- 1) ATPA 01: Identify of the project description, project activity and affected environmental components;
- 2) ATPA 02: Provide recommendations on scoping process;
- 3) ATPA 03: Identify relevant regulations related to hypothetical significant impact;
- 4) ATPA 04: Plan data collection and information of environmental baseline;
- 5) ATPA 05: Collect and verification data and information of environmental baseline;
- 6) ATPA 06: Analyze environmental baseline data;
- 7) ATPA 07: Estimating significant impact based on environmental baseline data;
- 8) ATPA 08: Provide recommendation on significant impact evaluation according to the responsibility of the AMDAL team member;
- 9) ATPA 09: Provide recommendation on environmental management and monitoring plan;
- 10) ATPA 10: Compile and submit AMDAL report according to the responsibility of AMDAL team member.

471. The assessment of KTPA in the competency certification shall focus on the following:

- 1) KTPA 01: Appoint and coordinate AMDAL team members;
- 2) KTPA 02: Provide recommendations for alternative location, design and process;
- 3) KTPA 03: Take decision on result of scoping to significant impact evaluation;

- 4) KTPA 04: Provide recommendations on the environmental feasibility or infeasibility of the activities of environmental management and monitoring plan;
- 5) KTPA 05: Compile and submit AMDAL report.

### Assessors of Competency Test

472. Presently INTAKINDO has cooperated with twenty eight (28) assessors. Evaluation of performance of the assessor is conducted by chief of INTAKINDO during his/her management period.

473. INTAKINDO selects assessors who should comply with the following criteria:

- Has experience at least ten (10) years in AMDAL issues as a AMDAL compiler, AMDAL reviewer and academician;
- Has expertise in AMDAL methodology according to applicable regulations;
- Able to communicate effectively both oral and in writing for applied language in the competency test;
- Free from any interest for performing an impartial and non-discriminatory assessment;
- Get written permission from the head concerned;
- Has a commitment of time to do the competency testing and assessment;
- Shall follow briefing to understand relevant certification schemes and competency testing procedure; and
- Shall sign and implement code of conduct of assessor.

### 4.3.3 EIA Consultant Firm (LPJP) and CIAC

#### EIA Consultant Firm

474. EIA consultant firm (LPJP) shall be registered in the Ministry of Environment. The registration requirements stated in Article 3 of MOER No. 7/2010 for it has been revising now. Table below describes requirement of LPJP registration based on comparison of both regulations.

Table 4-3: Comparison of LPJP Registration Requirements in MOER No. 7/2010 and Its Draft Revision

No.	Requirements	MOER No. 7/2010	Draft Revision of MOER No. 7/2010
1	Incorporated firm.	Yes	Yes
2	Has Firm tax payer registration number (NPWP).	Not regulated yet	Yes
3	Has at least an in-house CIACs as KTPA.	2	1
4	Has legal contract agreement with involved temporary CIACs and other experts in an EIA document compiling.	Yes	Yes
5	Has quality management system.	Yes	Yes

No.	Requirements	MOER No. 7/2010	Draft Revision of MOER No. 7/2010
6	Implement internal quality control for an EIA document compiling and keep independently principle or avoid interest factor.	Yes	Yes

475. Validation of LPJP registration is three (3) years and can be renewed. Presently the number of registered LPJP in MOEFOR is one hundred and sixteen (116) available in (twenty eight) 28 provinces. During validation period, MOEFOR via Assistant Deputy of Standardization and Technology (*Asisten Deputi Standardisasi dan Teknologi/ASDEP Stantek*) carries out surveillance minimum one (1) time to each registered LPJP for renewal registration.

#### **CIAC (Certified Individual AMDAL Consultant)**

476. Article 10 of Government Regulation No. 27/2012 regarding Environmental Permit has mentioned that a project proponent shall prepare AMDAL document for a project requiring AMDAL. The project proponent can appoint an Independent CIAC or AMDAL consultant firm (LPJP). Independent CIAC and LPJP shall be registered in the Ministry of Environment.

477. The registration requirements of Independent CIAC as mentioned in Revision Draft of MOER No. 7/2010 are: (1) has NPWP (*Nomor Pokok Wajib Pajak/Tax ID Number*); (2) has ATPA/KTPA competency certificate; (3) prepare statement letter for not affiliated as permanent or temporary staff in a LPJP; and (4) has a Quality Assurance (QA)/Quality Control (QC) in compiling AMDAL document.

### **4.4. Best Practices of Competency Certification Scheme in Indonesia and Other Countries**

#### **4.4.1 Indonesian Doctor of Medicine/Dental Competency Test**

478. A doctor and dentist (hereinafter called "doctor") should have a competency certificate if they choose to practice as a doctor. The competency certificate is obtained after passing the certification test (Law No. 27/2004 Article 1, Clause 4). The doctor competency certificate is carried out and issued by the *Komite Bersama Uji Kompetensi Dokter Indonesia*/KB-UKDI (Joint Commission of Indonesian Doctor Competency Test) stated in the Government Regulation No. 19/2005 Article 89, Clause 5. The KB-UKDI consists of: (1). Indonesian Doctor Collegium: professional organization of the every scientific discipline (Law No. 29/2004 Article 1 point 13); (2). Indonesian Doctor Educational Institution Associates (*Asosiasi Institusi Pendidikan Kedokteran Indonesia*/AIPKI); and (3). Indonesian Family Doctor Association (*Persatuan Dokter Keluarga Indonesia*/PDKI).

479. The KB-UKDI was established in December 2005 and the doctor certificate test has been started since 2007. The doctors who have practice permission and graduate before 2007 are not obligated to take the competency test. The competency certificate is a requirement for doctor to get a registration letter from Indonesian Doctor of Medicine/Dental Council (*Konsil Kedokteran Indonesia*/KKI). The KKI is an autonomous board, independent and non-structural that consists of doctor of medicine council and doctor of dental

council. The KKI is responsible to the President of Republic of Indonesia (Law No. 29/2004 Article 4, Clause 2).

480. The competency certification test is also compulsory for nurse, midwife, physiotherapist, radiographer, dental technician and others (in total there are 21 professionals field in health disciplines with education level of diploma 1-3).

481. Competency test for doctor is required as completion program of doctor. The latest regulations for competency test for doctor are Law No. 20/2013 regarding Medical Education and Ministry of Education Regulation (MOEDR) No. 30/2014 regarding Procedure of Competency Test for Medical and Dentistry Programs.

482. The following table is profession competency system for doctor and dentist:

Table 4-4: Profession Competency System for Doctor and Dentist

No.	Issues	Requirements	Legal Basis
1.	Entitled applicant	<ul style="list-style-type: none"> <li>Graduated doctor/dentist;</li> <li>Has profession certificate issued by university;</li> <li>Has certificate from profession organization;</li> </ul>	Law No. 20/2013 Article 36 (MODR No. 30/2014 Article 3 Clause 3)
2.	Executor of competency test	<ul style="list-style-type: none"> <li>Faculty of medical/ dentistry in cooperating with AIPKI/<i>Asosiasi Institusi Pendidikan Kedokteran Indonesia Gigi</i> (AIPKG) and profession organization;</li> <li>The cooperation forms National Competency Test Committee (NCTC) and defined by Directorate General of Higher Education, Ministry of Education.</li> </ul>	MODR No. 30/2014 Article 36 MODR No. 30/2014 Article 5, Clause 1 and 4.
3.	The NCTC is coordinated with profession organization	Tasks of the NCTC are: <ul style="list-style-type: none"> <li>Prepare blue competency test</li> <li>Define strategy, method and system of competency test</li> <li>Evaluate implementation of competency test</li> <li>Report result of competency test to profession organization for issuing certificate</li> </ul>	MODR No. 30/2014 Article 6

#### 4.4.2 Certification of Tax Consultant

483. Minister of Finance Regulation (MOFR) No. 111/PMK.03/2014 regarding Tax Consultant regulates procedure of tax consultant certification. A tax consultant has been required to practice his/her tax services as in following figure.

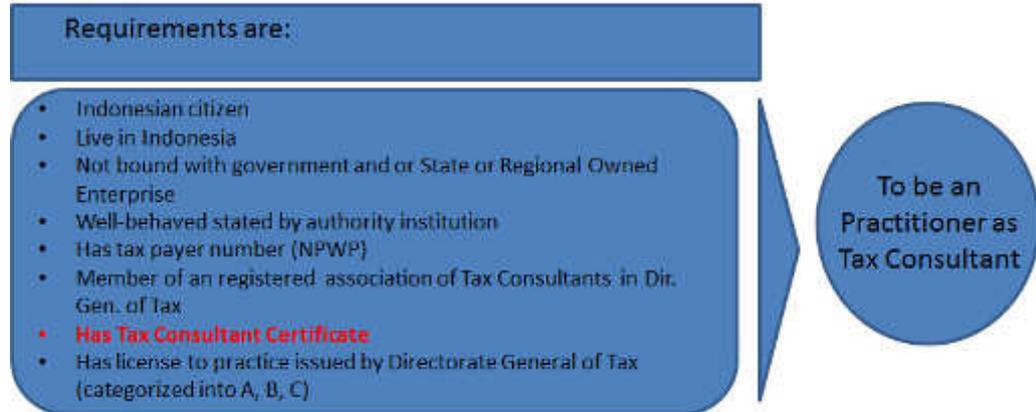


Figure 4-3: Requirement of Practitioner of Tax Consultant

484. Tax consultant certification is carried out by Tax Consultant Certification Committee (*Panitia Penyelenggara Sertifikasi Konsultan Pajak/PPSKP*). The PPSKP is defined via Decree of the Ministry of Finance for three (3) years period and extendable.

485. The PPSKP is involved of Steering Committee and Executing Committee. Tasks and committee structure are shown in table below.

Table 4-5: Task and Member of Steering Committee and Executing Committee of Tax Consultant Certification Committee (PPSKP)

No.	Issues	Steering Committee	Executing Committee
1.	Task	<ul style="list-style-type: none"> <li>• Define organization structure of Executing Committee;</li> <li>• Define test material and questions for certification and equivalency certification of retired staff of Directorate General of Tax (DOT);</li> <li>• Define passing criteria;</li> <li>• Define certification cost.</li> <li>• Evaluate implementation of certification;</li> <li>• Resolve disputes in Executing Committee;</li> <li>• Receive and follow up grievance related to implementation of certification;</li> <li>• Appoint a public accountant to audit financial report of PPSKP based on Executing Committee proposal;</li> <li>• Define criteria and decide university grade A;</li> <li>• Define criteria for certificate grade of retired staff of DOT.</li> </ul>	<ul style="list-style-type: none"> <li>• Collect and manage test material and questions, and activities for equivalency certification for retired staffs of DOT;</li> <li>• Levy and manage tax consultant cost;</li> <li>• Determine time and location of certification test implementation and activities for equivalency certification for retired staffs of DOT;</li> <li>• Implement tax consultant certification;</li> <li>• Assess result of certification test and activities for equivalency certification for retired staffs of DOT;</li> <li>• Determine graduation of tax consultant certification applicants;</li> <li>• Determine certification grade for retired staffs of DOT based on Steering Committee's criteria;</li> <li>• Issue the tax consultant certificate.</li> </ul>
2.	Organization structure	1) Chairman as member: representative from DOT	Organization structure and member of Executing

No.	Issues	Steering Committee	Executing Committee
		2) Secretary as member: Tax Education and Training Center (TETC) 3) Members: a. Two (2) persons from DOT proposed by Director of DOT; b. One (1) person from TETC proposed by head of TETC; c. One (1) person from Inspectorate General of MOF proposed by the Inspector General of MOF.	Committee are proposed by chairman of Association of Tax Consultants. Director of DOT proposes Association of Tax Consultants which will be a member of Steering Committee and Executing Committee to Minister of MOF. The Minister of MOF will define the Association of Tax Consultants.
		d. Two (2) persons from central board of Association of Tax Consultant appointed by chairman of the Association; e. Two (2) persons from academics appointed by minister of MOF; f. One (1) person from tax practitioners appointed by minister of MOF.	Requirements of member of Executing Committee are: <ul style="list-style-type: none"> <li>• Has expertise in tax;</li> <li>• Has not been convicted to prison;</li> <li>• Not in convicted status;</li> <li>• Not bound in government institutions.</li> </ul>

Source: *Peraturan Menteri Keuangan No. 111/PMK.03/2014*

486. Requirements to obtain tax consultant certificate are:

- 1) Has Graduation certificate from tax program study of scholars (S-1) or diploma (D-IV) of universities defined by PPSKP and automatically get Grade A certificate;
- 2) Pass tax consultant certification test; or
- 3) Follow activities of equivalency certification for retired staffs of DOT.

487. Categorization of tax consultant certificate is divided into three (3): Grade A, B and C.

Table 4-6: Type of Tax Consultant Certification and Applicant Requirements

No	Type of certificate	Applicant Requirements
1	A	1. Graduate from Diploma (D-III) of accountant program study or tax program study; or 2. Graduate from scholar (S-1) or Diploma IV (D-IV) of accredited universities or official university.
2	B	1. Has Grade A certificate; 2. Graduate from scholar (S-1) or Diploma IV (D-IV) of accredited universities or official university.
3	C	1. Has Grade B certificate; 2. Graduate from scholar (S-1) or Diploma IV (D-IV) of accredited universities or official university.

#### 4.4.3 EIA Certification Scheme in India

488. In India, the accreditation scheme is purposed for the EIA consultant organization only. The assigned institution for national accreditation structure is the Quality Council of India (QCI). The QCI is an autonomous non-profit institution joined with the Government of India and the represented three (3) premier Indian Industries associations such as the Associated Chamber of Commerce and Industry of India (ASSOCHAM), Confederation of Indian Industry (CII) and Federation of Indian Chambers of Commerce and Industry (FICCI). Some institutions are constituent of the QCI such as National Registration Board for Personnel & Training (NRBPT) and National Accreditation Board for Education and Training (NABET).

489. The Government of India concerns for improving quality of EIA report produced by EIA Consultant. The Government has concluded that well designed accreditation scheme will support in defining the requirements of EIA Consultant firms. It will contribute towards improving the quality of EIAs in Indian country. Several reasons that affected the EIA report prepared by the EIA consultant did not achieve the desired quality are:

- Competence (combination of relevant education, training and experience) of the consultant that carried out EIA study;
- Quality data that is used;
- Tendency of consultants to use “cut-paste” method in preparing EIA reports;
- Consultants work for and on behalf the Project Proponents.

490. The accreditation scheme of EIA organization developed by NABET identifies the basic requirements for EIA Consultant firm:

- a) Qualification and experience of EIA Coordinators (ECs) and Functional Area Experts (FAEs);
- b) Requirement for field investigation and laboratory arrangement to ensure the quality of the baseline data;
- c) Quality management system to be followed;
- d) Office facilities and other enabling factors to be provided by an organization.

491. An EC and FAE have to possess the followings requirements in below table:

Table 4-7: General Knowledge of an EC and FAE

<b>EIA Coordinator (EC)</b>	<b>Functional Area Expert (FAE)</b>
(a) Has clarity concept of EIA process;	(a) Has in-depth knowledge in their respective areas of specialization;
(b) Has knowledge of applicable laws, rules and regulations;	(b) Has broad understanding of the EIA process;
(c) Has domain knowledge of the project activities for which EIAs are to be prepared;	(c) Has capability in assessing the impact of the project on physical, biotic and social environment;
(d) Has broad understanding on environmental aspects in the project activities;	(d) Has knowledge to suggest the mitigation measures.
(e) Has leadership quality in planning, selecting and guiding the EIA team.	

492. The EIA consultant organization application is assessed by the assigned experienced professionals from NABET. The assessment process will comprise of Initial Assessment (IA) and Surveillance Assessment (SA). Each application is assessed by two assessors (Principal Assessor/PA and Associate Assessor/AA) supported by the NABET staff. The IA is carried out at the beginning of application and SA is at the end of 1<sup>st</sup> and 2<sup>nd</sup> year after accreditation. Assessment criteria for both initial and surveillance assessments are shown below.

Table 4-8: Assessment Criteria for Initial and Surveillance Assessment in India

No.	Initial Assessment (IA) Criteria		Surveillance Assessment (SA) Criteria	
	Items	Mark	Items	Mark
1	Quality of personnel based on interview: (a) EIA Coordinator/s; (b) Functional Area Expert(-s).	20 20	Compliance with conditions of accreditation.	10
2	Development of and conformance to quality manual.	15	Field investigation and laboratory analysis, implementation of systems and procedures to ensure data integrity.	15
3	Field investigation and laboratory work.	20	Quality assurance, organizational systems, and procedures meet scheme's requirements	20
4	Completeness of EIA prepared by the applicant.	10	Content & quality of EIA.	20
5	Organizational Evaluation (including office facilities).	15	Public consultation and due diligence on the outcome giving action plan.	10
6	-		Performance of approved experts.	10
7	-		Organization evaluation.	15
	Total	100	Total	100

493. The EIA consultant organization will get category A and B after initial assessment. The category A needs score minimum 60 and will be able to carry out EIA for both category A and B projects as defined in MOEF notification. The category B needs score minimum 40 and will carry out category B projects. An applicant may be recommended for category A for some sectors and category B for others depending on the quality of experts, experience, etc., as assessed by NABET Assessors.

494. Any organization to be accredited must have:

- One (1) in-house EIA Coordinator (EC), at least;
- Two (2) in-house Functional Area Experts (FAE), at least;
- Both EC and FAE should have the required qualification and experience covering the core functional areas of AP (Air Pollution Monitoring, prevention and control), WP (Water Pollution Monitoring, Prevention and Control), SHW (Solid and Hazardous Waste Management), EB (Ecology and Biology) and SE (Socio-Economics Aspects);
- An expert may opt for a maximum of five (5) sectors as an EC and four (4) functional areas as an FAE;

- A freelance expert may be shown as an EC and FAE;
- An expert who is in full time employment of a company cannot be proposed as an empanelled expert for another AMDAL consultant organization;
- The consulting organization must have an arrangement with The National Board for Testing and Calibration Laboratories Accredited or MOEF recognized laboratory for environmental baseline data generation.

495. The qualification and experience requirement of EIA coordinator and functional Area Expert are as following:

a). Minimum Education Qualification

- i) B.Sc (*Sarjana*) or equivalent in Engineering/Architecture/Environmental Planning/City Planning and the like from the recognized university/institution;
- ii) M.Sc in Physical/Environmental/Life Science/Social Science/Economics and Management from the recognized University or institution.

Qualification conferred by:

- The institution of Engineers;
- Indian Chemical Society;
- Indian Institute of Metals;
- Indian Institute of Chemical Engineers;
- Indian Institute of Social Welfare and Business Management; and/or,
- Organization which are recognized as equivalent to the above in respective fields by the government will also be accepted.

b). Minimum Experience

- i) EIA Related: minimum have seven (7) years work experience related to EIA in:
  - As an EIA Coordinator;
  - As a Functional Area Experts assisting the EIA team;
  - As a team members supporting the EIA Coordinator;
  - As a professional in The EHS or The Concerned depth of the project proponent getting EIA, conducted by external consultants;
  - In the role of appraised of EIA reports as a regulator/appraiser/academician.
- ii) Specific Sector

Any one of the following:

- Three (3) completed EIA (or the document have been approved) in the sector;
  - Three (3) environmental assignments (monitoring, auditing, performance evaluation) in the sector;
-

- Three (3) in combination of (1) and (2);
- Two (2) years experience in an industry in the sector as one employee in the EHS.

#### 4.4.4 EIA Consultant Registration Scheme in Malaysia

496. The registration scheme of EIA consultant in Malaysia is designed to improve the standard of professionalism among EIA practitioners by ensuring the minimum qualification and skill required to conduct an environmental impact assessment study.

497. There is no certification of EIA consultant or the consultant who should be involved in the EIA study. In Malaysia, any person who shall be involved in EIA study must be registered in DOE. Applicant/candidate the EIA consultant should fulfil the minimum requirement criteria as define at Table 6-4.

498. New EIA consultant registration procedure is as follows:



Figure 4-4: Registration Procedure of New EIA Consultant

499. AMDAL Consultant and Assistant Consultant may select up to four (4) areas of expertise, meanwhile Subject Specialist may only indicates one area of expertise. Candidates who choose more than four (4) areas are required to attend an interview. The selection of area of expertise shall be based on the individual's academic qualifications, related training and experience. For other applicants, the interview will be conducted on a case by case basis (e.g. if further clarification is needed or based on recommendation from referees).

500. The criteria of applicant is as listed in the table below:

Table 4-9: Registration Criteria for EIA Consultant, Subject Specialist and Assistant Consultant

Criteria	EIA Consultant	Subject Specialist	Assistant Consultant
(i) Academic Qualification	Degree in sciences, technology or engineering.  Applicants with non-technical or sciences degree may only work within their academic background.	Degree with minimum seven (7) years of working experience in the selected field <b>or</b> Masters degree with minimum five (5) years of Working experience in the selected field <b>or</b> PhD with min. three (3) years of	Degree in sciences, technology, or engineering. Applicants with other non-technical or science degree may only work within their academic specialization or Diploma in sciences, technology

Criteria	EIA Consultant	Subject Specialist	Assistant Consultant
		working experience in the selected field.	or engineering.
(ii) General environmental Management experience.	Minimum seven (7) years.	Not required	Minimum one (1) year.
(iii) EIA related Experience.	Minimum five (5) years	Not required	Not required
(iv) Minimum number of EIA approved reports	Five (5) reports	Not required	Not required
(v) Core Competencies	<p>(i) Attendance of formal EIA training (evidence to be supplied);</p> <p>(ii) Sufficient understanding of EIA processes (e.g scoping, screening, impact assessment, mitigating measures, monitoring, report writing, preparation of EMP, project management skills;</p> <p>(iii) Sufficient understanding of environment planning;</p> <p>Regulations in Malaysia. Evidence on the expertise (core competencies) in the form of certificates or examination/test results must be submitted together with the application.</p>	<p>Must be highly competent in the selected field (evidence to be supplied).</p> <p>Subject specialist must be able to perform detailed study and detailed assessment which may include modeling.</p>	<p>(i) Attendance of formal EIA training (evidence to be supplied);</p> <p>(ii) Basic understanding of EIA processes (e.g. coping, screening, impact assessment, mitigating measures, monitoring, report writing, preparation of EMP, project management skills;</p> <p>(iii) Basic understanding of environmental and planning regulations in Malaysia.</p>
Other requirements			
Portfolio of work	Submit 5 most relevant EIA reports previously completed	Submit portfolio work they have involved in the field of expertise selected	
References	Submit two (2) individual referees who can verify his/her capabilities, skill, knowledge and experience.	Submit two (2) individual referees who can verify his/her capabilities, skill, knowledge and experience in the field of expertise selected.	Submit two (2) individual referees who can verify his/her capabilities, skill, knowledge and experience.

Note :

(i) Science disciplines may include natural sciences, biological sciences, physical sciences, earth sciences and environmental sciences;

(ii) Technology disciplines may include Bioprocess, Biotechnology and Environmental Technology;

(iii) Engineering disciplines may include Environmental Engineering, Chemical Engineering, Civil Engineering and Electrical Engineering;

(iv) Applicant with medical degree and specific training in Health Impact Assessment may only work in Health Impact Assessment;

(vii) Applicants with other degree, may only work within their specialized area;

(viii) Competency may also be obtained by attending specialized training or certification course.

501. The area of expertises are listed as following:

Table 4-10: Areas of Expertise for Environmental Impact Assessment Study (EIA)

Forestry	Air quality and odor	History	Industrial processes (other than chemical processes)
Ecological studies	Landscape & visual	Traffic impact assessment	Land use planning
Fisheries	Geology & soil	Social impact assessment	Mining
Hydrology	Geo-technical study	Economic valuation/ economic analysis	Quarrying
Water quality	Geo-morphology	Health impact assessment	Scheduled waste management
Waste water	Hydro-geological study	Quantitative risk assessment	Solid waste management
Noise & vibration	Archaeology	Chemical processes	Others (please specify)

Source: AMDAL Consultant Registration Scheme Guidance Document. Department of Environment, Ministry of Natural Resources and Environment.

Note:

Specific information on the field of expertise can be further clarified in the Application Form. For example, you may indicate environmental models that you are familiar with as well as your sector experience.

502. For registration renewal, the registered consultant shall submit registration renewal every three (3) years for EIA consultant and five (5) years for subject specialist. The requirements are in three (3) years, the consultant must fulfill a minimum of 5 (five) qualifying EIA experiences and minimum of fifty (50) hours per year of Continued Professional Development (CPD) which must also be recorded in the log book. As for subject specialist shall fulfill minimum twenty (20) hours per year of his field of expertise CPD and other relevant environmental management fields. All registered individuals are required to keep a personal log of relevant experience and training, which must be either signed by the project proponent or client or be substantiated by documentary proof. Log-sheets must be submitted to the DOE at the time of renewal of registration or upon request.

503. Continuous Evaluation Process objective is to evaluate the consultants' performance. The desk officers of Department of Environment (DOE) for EIA report will provide their comments on study team members' performance and channel it to the Secretariat and will used for renewal purpose. To ensure fair

and uniform assessment, all EIA processing officers will be trained to carry out the evaluation by using a set of criteria and guidelines.

#### 504. Continuous Professional Development (CPD)

Registered individuals should develop their personal attributes and skills by:

- (i) Ensuring that their knowledge on EIA and impact assessment techniques is current best practice;
- (ii) Ensuring that their knowledge of environmental laws, regulations and procedures is current;
- (iii) Undertaking refresher training where necessary;
- (iv) Ensuring that their experience in the execution of relevant EIA works are current and maintained.

Some of the activities that qualified for CPD are:

- (i) Participation in EIA Panel Meeting as Expert Panel;
- (ii) Related workshop;
- (iii) Related training;
- (iv) Resource person for related seminar or training;
- (v) Technical meetings related to environmental management, planning or consultants' expertise.

*Note :*

*(i) Course/workshop/training providers will have to obtain approval from DOE for CPD hours.*

*(ii) Registered individuals shall refer to Guidance Document on CPD for EIA Consultants, published by DOE Malaysia for further clarification (in drafting process and will be published soon).*

#### **4.4.5 Comparison Analysis between Indonesia AMDAL System and Best Practices**

505. In Indonesia, AMDAL document shall be prepared by the Project Proponent by appointing AMDAL consulting firms or by a team of individual AMDAL consultants. The quality of AMDAL document depends on the qualification and experience of AMDAL consultants, AMDAL consulting firms and AMDAL Review Commission (ARCs) in MOEFOR, provinces and regencies/cities.

506. Indonesia applies competency certification (hereinafter is called certification) system for the individual consultant and registration for the AMDAL consultant firm. Malaysia applies the individual and consultant registration system. India applies only accreditation of the AMDAL consultant firms.

507. In Malaysia, both EIA consultant firm and individual EIA consultant must be registered in DOE. As for the individual EIA consultant is divided into three (3) categories: Assistant Consultant (AC), EIA Consultant (EC), and Subject Specialist. Malaysia applies specialization of each category of Consultant by sector and area of expertise.

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508. In India, it is a mandatory for an organization (firms) which prepared AMDAL reports for obtaining environmental clearance or accredited by Quality Council of India (QCI) which developed National Accreditation Board for Education and Training (NABET). The qualification of education and experiences of EC and FAE has important role in AMDAL consultant firm, and the firm accredited or not accredited were depending upon the EC and FAE educational and experience qualifications. In India EIA coordinator and Functional Area Expert are not accredited, but their education qualification and experience are strictly defined.

509. Comparison of the three (3) types of professional certification system in Indonesia and other countries is as shown in following table. One of the differences among those three (3) cases of professional certification system is that only AMDAL Consultant certification system that is not supported by its association. Today there are some agencies as embryo of association of AMDAL consultant, namely FAI (*Forum AMDAL Indonesia/Indonesian AMDAL Forum*); INKALINDO (*Ikatan Pengkajian Lingkungan Hidup Indonesia/Association of Indonesia Environmental Analysis*); and BKPSL (*Badan Koordinasi Pusat Studi Lingkungan/ Badan Koordinasi Pusat Studi Lingkungan*). MOEFOR, INTAKINDO, FAI, INKALINDO, and BKPSL need joint meeting to discuss the procedure of certification of competention for AMDAL consultant.

Table 4-11: Comparison of Indonesian Professional Certification System and Accreditation System in India and Malaysia

Items	Certification of Competence in Indonesia			Accreditation of EIA Firm in India	Registration Scheme of EIA Consultant in Malaysia
	Doctor of Medicine	Tax Consultant	AMDAL Consultant		
1. Institution (Implementer)	KB-UKDI supported by: a. KDI; b. AIPKI; c. PDKI;	BP-USKP supported by: a. <i>Pusdiklat Perpajakan</i> ; b. Directorate General of Tax; c. IKPI; d. FISIP UI; e. STPI.	INTAKINDO supported by: MOEFOR (In Indonesia there is no Association of AMDAL Consultant yet).	QCI supported by: a. Government; b. ASSOCHAM; c. CII; d. FICC.	DOE
2. Target of Certification/ Accreditation	Doctor of Medicine and Doctor of Dental graduate after April 2007	All Candidate of Tax Consultant	All Candidate of AMDAL Consultant	EIA Consultant Firm	
3. Target of Registration	Doctor of Medicine and Doctor of Dental graduate after April	All Candidate of Tax Consultant	LPKA LPJPA AMDAL Consultant		EIA Consultant

Items	Certification of Competence in Indonesia			Accreditation of EIA Firm in India	Registration Scheme of EIA Consultant in Malaysia
	Doctor of Medicine	Tax Consultant	AMDAL Consultant		
	2007				
4. Certification Registration/ Accreditation Institutions	KKI (Konsil Kedokteran Indonesia)	Directorate General of Tax	MOEFOR	MOEF	DOE

510. The following table shows the comparison among Indonesia, Malaysia and India in procedure of registration/accreditation/competency of EIA individual consultant and organization. Indonesia is possible to take best learning from other countries such as Malaysia and India.

Table 4-12: Best Practices from Several Countries to be Adopted in Indonesia

No.	Items	Malaysia	India	Indonesia	Best Practice Recommended to be Adopted by Indonesia
1	Registration, Accreditation or Certification of EIA Consultant	<p>Certification is not applied, only registration to DOE, with categories of:</p> <ul style="list-style-type: none"> <li>- Assistant consultant (AC);</li> <li>- EIA consultant (EC);</li> <li>- Subject specialist.</li> </ul> <p>Apply specialization system or area of expertise in Registration Scheme</p> <p>Requirements for registration includes the specialization and expertise areas, so the Consultant who has been registered only allowed to prepare AMDAL report on his/her specific areas that has been registered.</p>	<p>Certification is not applied for Individual Consultant, only for EIA Consultant Firm (accreditation)</p>	<p>Categories of certification are:</p> <ul style="list-style-type: none"> <li>- Team Leader (KTPA);</li> <li>- Member (ATPA);</li> <li>- Requirements for applying certification test: academic background and experience in preparing a minimum of 5 AMDAL documents.</li> </ul>	<p>Theoretically, Indonesia has a higher accreditation system, since certification system is already applied for the Individual Consultant. However, there is no specific different on the requirements for applying KTPA and ATPA. Best practice in Malaysia specialization and expertise areas possibly to be introduced into Indonesia's certification system.</p>
2	Area of Expertise	<ul style="list-style-type: none"> <li>- AC and EC shall choose four areas of expertizes to be registered if more than 4 then the applicant shall be interviewed by the registration committee appointed by the DOE;</li> <li>- Subject specialist shall only choose one area of expertise;</li> <li>- An EIA consultant can register as subject specialist in parallel.</li> </ul>	<ul style="list-style-type: none"> <li>- As EIA coordinator (EC), s/he shall have experiences on sector/s proposed by the applicant organization. Apart, an EC shall possess clarity in EIA process concept, act, rules, regulation and leadership. The EC should have domain knowledge of industry/sector for which EIAs are to be prepared and broad understanding of environmental aspect related to the sector;</li> <li>- Functional Area Experts (FAE). The FAEs are expected to provide input related to their respective areas of specialization and they should have an in-depth knowledge in the</li> </ul>	<p>Not applied.</p> <p>Though in actual, some EIA compilers have specified themselves to be experts on physical or biotic and/or social environment.</p>	<p>It should consider providing an official area of expertise for an EIA compiler.</p> <p>The twelve (12) areas of expertise applied in India can be used as best practice to be adopted especially for the Team Leader (KTPA), in or the framework to improve the quality and depth analysis of AMDAL Document based on expertise areas that the Team Leader has been experienced.</p>

No.	Items	Malaysia	India	Indonesia	Best Practice Recommended to be Adopted by Indonesia
			<p>specialization area, broad understanding of EIA process and capability of assessing the project impact of the physical, biotic and social environment as well as suggesting the mitigation measures.</p> <p>There twelve (12) areas of expertise such as land use; air pollution, monitoring, prevention &amp; control; meteorology, air quality modeling &amp; prediction and etc.</p>		
3	Accreditation or Registration of EIA consultant firm	Registered at DOE.	<p>- Apply accreditation scheme by NABET. The requirements are:</p> <ul style="list-style-type: none"> <li>(a) Qualification &amp; experience of ECs and FAEs;</li> <li>(b) Field investigation &amp; laboratory arrangement to ensure the quality of the baseline data;</li> <li>(c) Quality management system;</li> <li>(d) Office facilities &amp; other enabling factors to be provided by an organization.</li> </ul> <p>- The EIA consultant organization should be accredited by sectors (40 sectors); list issued by the MOEF. The EIA consultant organization should have one (1) EC and two (2) FAEs in-house. The EC is possible as FAE too;</p>	Registered at MOEFOR if the Firms has one certified Team Leader and 2 certified members that verified by Registration Committee;	It should consider possibility of to divide the registration of EIA consultant company by sectors such as applied in India. A Consultant firm is allowed to be registered for more than one sector, as long it has the qualified and certified Team Leader related to the sector that it proposed to be registered in.

No.	Items	Malaysia	India	Indonesia	Best Practice Recommended to be Adopted by Indonesia
			- The accredited EIA consultant company with category A will do EIA for both projects.		
4	Surveillance	The EC and subject specialist work in preparing EIA report are overseen by DOE during presentation. The in-charged DOE staffs are trained to evaluate the EC and subject specialist then the report will be sent to secretariat of DOE and used for re-registration.	The EIA consultant company is overseen through the Surveillance Assessment (SA) conducted by NABET. The assessment will be done in end of the 1 <sup>st</sup> and 2 <sup>nd</sup> years after the accreditation.	<ul style="list-style-type: none"> <li>- There is specific mechanism on surveillance of the quality of the certified Individual Consultant or Consultant Firm, unless it is reported as ethic violation;</li> <li>- The Certified Individual AMDAL Consultant (CIAC) is obligated to fulfill the log book. Contents of the log book are experience of CIAC preparing EIA report and CPD during three years and the logbook is submitted to INTAKINDO for renewal of competency certificate;</li> </ul>	It needs official mechanism to monitor the quality of EIA document prepared by CIAC and its consultant, the result of evaluation will be used for renewal of certificate. Evaluation of the certified Consultant can be made during the ARC meeting and evaluation of the CIAC can be done by the Secretary of ARC. It needs to establish the guideline or manual for evaluation or the training on evaluation.
5	Renewal of Registration or Certificate	<ul style="list-style-type: none"> <li>- EC is required to renew their registration every three years. The renew requirements are 5 qualifying EIA experiences and minimum 50 hours CPD per year;</li> <li>- The renew subject specialist is every 5 years and the specialist shall fulfill minimum 20 hours per year of CPD in her/his area expertise.</li> </ul> <p>The acceptable activities qualifying for EIA experiences are participation on EIA TOR preparation, EIA study, environmental assessment or site assessment. EMP preparation, any EIA guidance document or other environmental and technological guidelines, and study or research. Activities qualifying for CPD are participating in EIA panel as expert panel, workshop, training, resource person for related seminar or training and related technical meeting</p>	The renewal of accreditation of EIA consultant organization will follow the procedure of the new accreditation and result of SA	<ul style="list-style-type: none"> <li>- Validity of the competency certificate of the Individual AMDAL Consultant is for 3 years, and can be renewed by submitting the log book. The requirements are preparing minimum 3 EIA documents and participating in CPD provided by INTAKINDO. The CPD topic based on curriculum of competency test;</li> <li>- The renewal of registration of EIA Consultant Company is every three (3) years.</li> </ul>	It needs to consider establishing the scheme for the renewal of the certificate in addition to the logbook such mentioned above to establish the evaluation of the CIAC capability and qualification during the ARC meeting.

#### 4.5. Challenges to be Addressed and Analysis

511. Poor quality of AMDAL document related to the procedure of AMDAL consultant certification and AMDAL training is divided into before obtaining AMDAL compiler certificate and after obtaining a certificate (certificate maintaining period).

##### Before Obtaining Competency Certificate

##### 4.5.1 Curriculum Gap between AMDAL training (LPKA) and competency assessment (LSK)

512. An applicant before obtaining competency certificate shall pass AMDAL training. There is a gap between AMDAL training curriculum and assessment subjects in a competency certificate test. There is not training subject of activity/project impact to environmental components and its mitigation in AMDAL training however the subject exists in competency certificate test as ATPA 01.

##### AMDAL Training Institution (LPKA)

513. LPKAs shall be accredited in MOEFOR. MOEFOR's Training Center (PUSDIKLAT) has assessed the accreditation of LPKAs. Three (3) accreditation components are assessed such as empowerment (45%), program (30%) and training facilities (25%). Details of assessment components are as shown in Appendix 3-1 and details of assessment criteria is shown in Appendix 3-2.

514. At the end of April 2014 Pusdiklat has accredited fifteen (15) LPKAs nationwide: nine (9) in Java, three (3) in Sumatra, one (1) in Sulawesi and two (2) in Kalimantan.

515. As for AMDAL compiling, the curriculum of LPKA shall based on Kep-11/Pusdiklat/LH/2012 that divided into two (2) categories, namely Basic AMDAL and AMDAL compiler. The percentage of a training session by subject is shown in the following figure.

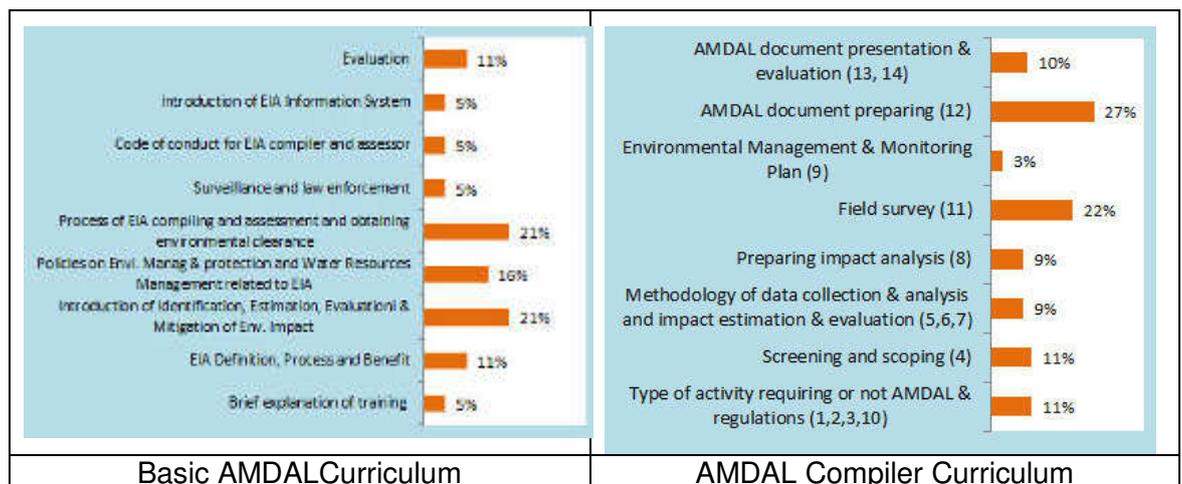


Figure 4-5: Percentage of Training Session by Subject for Basic AMDAL and AMDAL Compiler Reviewer Curriculum

## Competency Certificate Institution (LSK)

516. Based on competency test data in 2014, competency participants have weakness in Multiple Choice Test and Essay Test types such in verifying method of significant impact prediction, collecting primary data, providing a recommendation on the significant impact evaluation in accordance with resulted significant impact and the detail weakness result as shown in following figure. Most weakness is multiple choice question type.

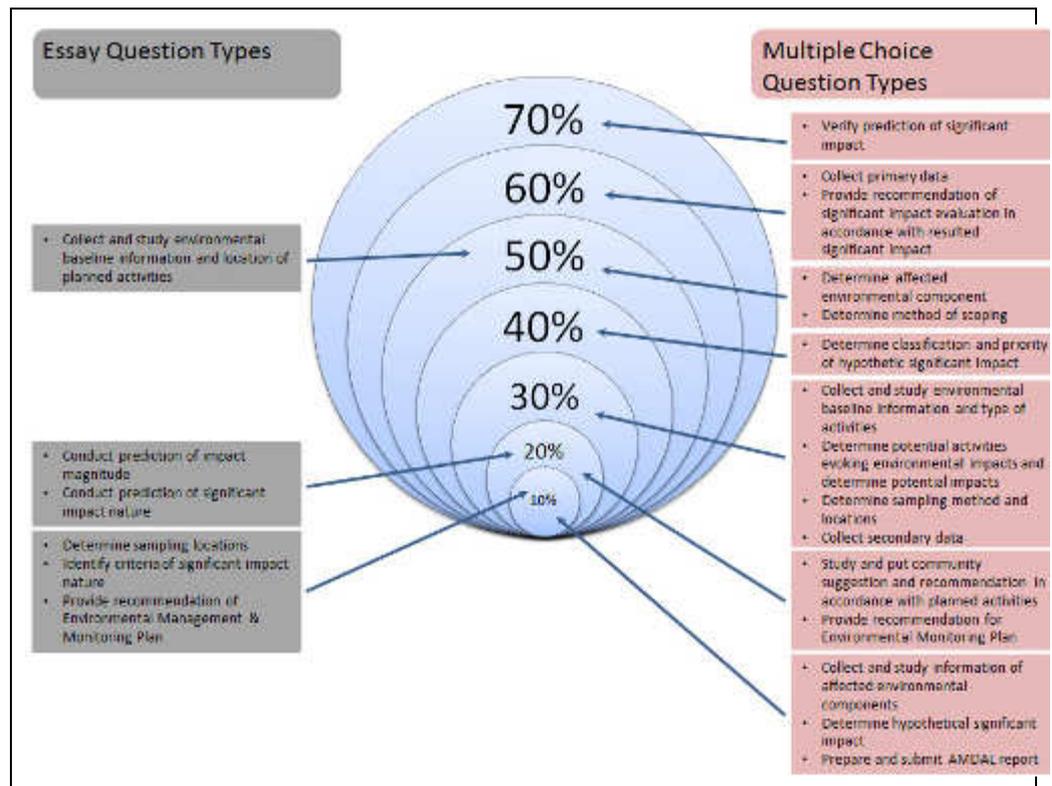


Figure 4-6: Subjects Weakness on Competency Test in 2014

517. Two figures above have confirmed that gap curriculum between LPKA and LSK have affected passing grade of competency test of verifying significant impact prediction is low (indicated at 70% failure in competency test).

518. AMDAL training is very important to equip an AMDAL compiler in preparing a qualified AMDAL document. Since background education of the applicant of CIAC is varied, the CIAC needs knowledge on the environmental impact caused by a development. This subject does not exist in existing curriculum and cause difficulty for an applicant who does not know the environmental impact yet.

519. Data of some training period in LSK was obtained and the data shows there is difference of passing grade of applicants having AMDAL training and not. The following table illustrates passing of competency test in LSK and number of applicants having AMDAL training passed higher than not.

Table 4-13: Comparison Number of Competency Passing Grade of Applicant Having AMDAL Training and Not.

Training Period	Without Particip. AMDAL Training			With Particip. AMDAL Training		
	Applicant	Pass	% lulus	Pemohon	Lulus	% lulus
Period 72	15	10	67%	9	4	44%
Period 73	18	1	6%	9	3	33%
Period 74	36	9	25%	19	4	21%
Period 75	21	9	43%	15	8	53%
Period 76	15	4	27%	11	3	27%
Period 77	14	9	64%	16	10	63%
Period 78	5	3	60%	9	7	78%
Period 79	6	1	17%	8	5	63%
Total	<b>130</b>	<b>46</b>	<b>Average</b>	<b>96</b>	<b>44</b>	<b>Average</b>
		<b>35%</b>	<b>38%</b>		<b>46%</b>	<b>48%</b>

520. At June 2014 total number of the certified individual AMDAL consultant (CIAC) is eight hundred and twenty eight (827) persons and forty percent (40%) of them are the applicants who did not attend the AMDAL training.

521. Besides, MOEFOR through PUSDIKLAT has assessed material training and lectures of the fifteen (15) LPKAs, how extend they are in line with the curriculum, and the assessment results are as follows:

- a. There are nine (9) LPKAs whose training subjects are in line with curriculum more than eighty percent (80%) and six (6) LPKAs whose training subjects are in line with curriculum sixty to eighty percent (60%-80%).
- b. There are three (3) LPKAs whose training module are in line with curriculum more than eighty percent (80%), three (3) LPKAs whose training module are in line with curriculum sixty to eighty percent (60%-80%) and nine (9) LPKAs whose training module are in line with curriculum forty to sixty percent (40%-60%).
- c. There are eight (8) LPKAs whose training handout is in line with curriculum more than eighty percent (80%) and seven (7) LPKAs whose training handout are in line with curriculum forty to sixty percent (40%-60%).
- d. There are eleven (11) LPKAs whose more than eighty percent eighty percent (80%) of training subjects were taught by lecturers who have formal education in line with the training subjects, there are three (3) LPKAs whose forty to sixty percent (40%-60%) of training subjects were taught by lecturers who have formal education in line with the training subjects and only 1 LPKA whose twenty to forty percent (20%- 40%) of training subjects were taught by lecturers who have formal education in line with the training subjects.
- e. There are ten (10) LPKAs whose more than eighty percent (80%) of training subjects were taught by lecturers who have competency certificate in line with the training subjects, there are four (4) LPKAs whose forty to sixty percent (40%-60%) of training subjects were taught by lecturers who have competency certificate in line with the training subjects and only 1 LPKA whose twenty to forty percent (20%- 40%) of

training subjects were taught by lecturers who have competency certificate in line with the training subjects.

- f. There are eleven (11) LPKAs whose more than eighty percent (80%) of training subjects were taught by lecturers who have relevant experiences in line with the training subjects, there are three (3) LPKAs whose sixty to eighty percent (60%- 80%) of training subjects were taught by lecturers who have relevant experiences in line with the training subjects and only one (1) LPKA whose twenty to forty percent (20%- 40%) of training subjects were taught by lecturers who have relevant experiences in line with the training subjects.

522. The assessment result of lecturers of LPKAs on formal education background, competency, and experience are as following:

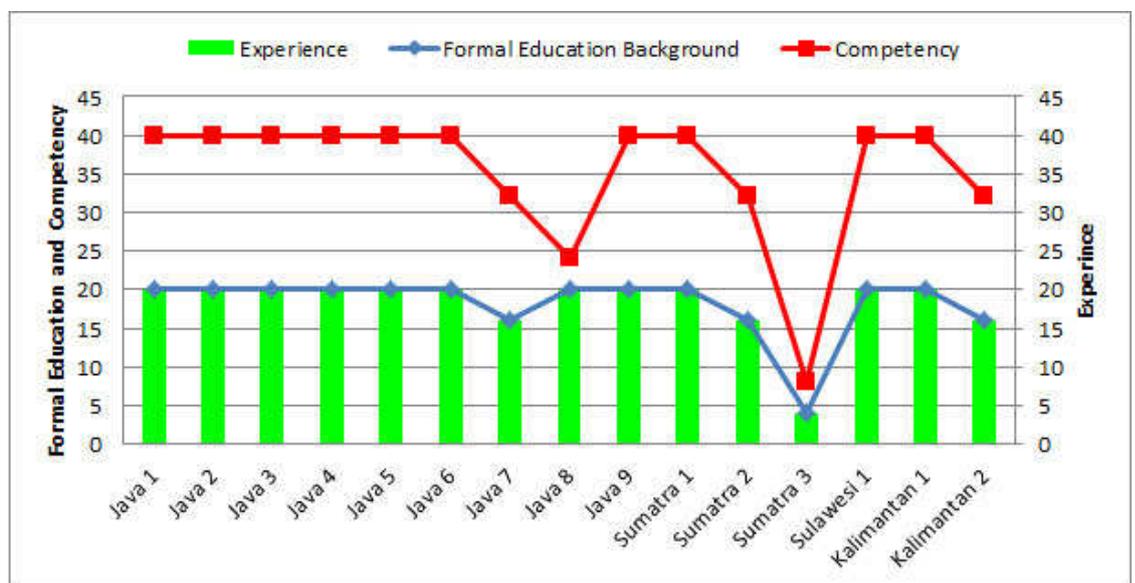


Figure 4-7: Accreditation Assessment Result on Experience, Formal Education Background and Competency of Lecturers in fifteen (15) Accredited LPKAs

<b>Suitability of formal education background of lecturers with their training courses</b>	
20	More than 80% of training courses were taught by lecturers who have formal education in line with the training courses
16	60%-80% of training courses were taught by lecturers who have formal education in line with the training courses
14	40%-60% of training courses were taught by lecturers who have formal education in line with the training courses
8	20%-40% of training courses were taught by lecturers who have formal education in line with the training courses
4	0%-20% of training courses were taught by lecturers who have formal education in line with the training courses
<b>Number of lecturers who have competency certificate in line with the provided training courses</b>	
40	More than 80% of the training courses were taught in line with the lecturer's competency
32	60%-80% of training courses were taught in line with the lecturer's competency
24	40%-60% of training courses were taught in line with the lecturer's competency
16	20%-40% of training courses were taught in line with the lecturer's competency
8	0%-20% of training courses were taught in line with the lecturer's competency
<b>Relevancy of teaching experience with the provided training courses</b>	
20	More than 80% of training courses were taught by lecturers who have suitable teaching experience
16	60%-80% of training courses were taught by lecturers who have suitable teaching experience
12	40%-60% of training courses were taught by lecturers who have suitable teaching experience
8	20%-40% of training courses were taught by lecturers who have suitable teaching experience
4	0%-20% of training courses were taught by lecturers who have suitable teaching experience

523. Some LPKAs conducted AMDAL training subjects below the training curriculum issued by Head Environmental Education and Training Center or *Pusat Pendidikan dan Latihan Lingkungan Hidup* (PUSDIKLAT LH).

524. The supervision to the LPKA is carried out regularly once a year by the MOEFOR, through field visit, review of the training implementation report, and/or assess the performance of training implementation.

525. Based on result of supervision, the MOEFOR can provide a warning letter to LPKA, suspend the LPKA's accreditation and revoke the accreditation if the LPKA violates the rules.

526. The LPKA function in the future will be more important. The LPKA will implement workshop or seminar or discussion concerning the emerged environmental issues in the country. These activities will also have function to maintain the competency of CIAC as well as AMDAL reviewer (as implementation of CPD program). In the competency certificate of AMDAL consultant, LPKA together with the association of AMDAL Consultant (FAI), MOEFOR, LSK/INTAKINDO develop/establish an Institution as Executor of Certification. Substance/material is prepared by all stakeholders which support this program.

527. To be an AMDAL compiler, Indonesia system and abroad system are different. In abroad, for being an AMDAL compiler they already have basic knowledge on water pollution or air pollution and etc., while in Indonesia system the applicants come from various background knowledge without basic knowledge on water or air pollution. Therefore, it totally depends on AMDAL training both basic AMDAL and AMDAL compiling trainings.

#### **4.5.2 Competency Test Method**

528. Many related stakeholders who concern to AMDAL compiling asks about competency test ways like a multiple choice question type whether the question test can measure competency skill of an AMDAL compiler. The question is easy for fresh graduate due to his/her good memory and sometime the question will be a little difficult for elders AMDAL practitioners.

529. LSK INTAKINDO has applied methods for competency test, such as 1). multiple choice question; 2). essay question; and 3). interview. The material of competency test is competency assessment for ATPA and KTPA based on MOER No. 7/2010.

530. To create qualified AMDAL compilers needs a comprehensive education system. Some considered comprehensive issues are (1). who are need AMDAL compilers; (2) how to produce AMDAL compilers; (3). how to train/educate AMDAL compilers; (4). how to examine AMDAL compilers; and (5). how to evaluate AMDAL compilers. There is a missing link among these issues because each issue seems independently from others. Therefore intensive/close cooperation among AMDAL stakeholders such as MOEFOR, LPKA, LSK, BKPSL, and FAI is necessary.

531. LSK INTAKINDO is planning to revise competency test methods. Portfolio scheme is considered to be implemented, though interview and case study test are carried out by assessor to confirm the applicant competency.

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532. In the certification maintaining period, many integrity violations are conducted by Certified Individual AMDAL Consultant (CIAC), AMDAL consultant firm (LPJP), Project Proponent, local government officer and AMDAL Review Commission (ARC). The kinds of integrity violations are:

#### 4.5.3 Certificate Abuse

533. Limited number of CIACs, weakness surveillance and lack of law enforcement cause certification abuse like as borrowing certificate.

534. Integrity violations conducted by CIACs such as “borrowing certificate” and forgery of certificate. As for “Borrowing Certificate”, a CIAC has not involved in the process of AMDAL document compiling, only LPJP who prepared the document, s/he is participating only in AMDAL document presentation in ARC. LPJP borrowing certificate is a LPJP who wins tender for AMDAL work with lowest bidding cost and want to get good profit.

#### Projection of CIAC Number by Total Project and Development Direction

535. Presidential Decree No. 32/2011 regarding Master Plan for the Acceleration and Expansion of Indonesian Economic Development (MP3EI) is the strategic direction of development policy during year 2011 to 2025 in long-term development plan (2005-2025). MP3EI is a reference to ministers and all non-ministerial leaders define sectorial policy in accelerating development which is stated in each strategic development plan and as reference for preparing policy on acceleration of developments in the province and regency/city

536. MP3EI has determined economic corridors for acceleration and expansion of development in Indonesia. There are seven (7) economic corridors that define by based on potential and advantage inherent to each region as follows

Table 4-14: Priority Development Activity in Economic Corridors

Economic Corridors	Priority Development Activities
Sumatera	Center for production and processing of natural resources and the nation's energy reserves.
Java	Driver for national industry and service provision.
Kalimantan	Center for production and processing of national mining and energy reserves.
Sulawesi	Center for production and processing of national agricultural, plantation, fishery, oil and gas, and mining.
Bali, Nusa Tenggara	Gateway for tourism and national food support.
Papua, Maluku	Center for development of food, fisheries, energy, and national mining.

537. Projection number of projects are assumed based on foreign and domestic investment data from Investment Coordinating Board (*Badan Koordinasi Penanaman Modal/BKPM*) and the increasing number of project uses Indonesia economic growth six percent (6%). The number of projects requiring EIA is assumed fifty six percent (56%) from BKPM data. The CIAC needed is estimated one EIA team comprises of three (3) persons and one (1) CIAC will prepare five (5) EIA documents per year. The projection 2013-2025 is shown below.

Table 4-15: Projection of CIAC Number in 2013-2025

Prediction of project & CCAC needed numbers	2013	2014	2015	2016	2017	2018	2020	2025
1. Total Number of Projects	3760	3986	4225	4479	4748	5033	5655	7567
2. Number of Projects Requiring AMDAL Report	2106	2232	2366	2508	2659	2818	3167	4238
3. CCAC Number Needed	1264	1339	1420	1505	1595	1691	1900	2543

538. As per June 2014, total AMDAL compilers who get competency certificate is eight hundred and twenty seven (827), though there is one hundred and eight (108) CIACs who have expired competency certificate and only seven hundred and nineteen (719) CIACs who have an effective competency certificate. The following table shows the present status of validation of CIACs certificate. It is mentioned that CIAC increasing per year as per one hundred and eighty (180) in average. This number compared with the CIAC demand for project is not enough. It needs an accelerated number of CIACs.

Table 4-16: Present Status of Validation of CIACs Certificate

No	Provinces	Effective CCACs			Expired CCACs			Total CCACs		
		KTPA	ATPA	Sub-total	KTPA	ATPA	Sub-total	KTPA	ATPA	Total
1	Sumatera	58	46	104	5	8	13	63	54	117
2	Java	191	241	432	23	51	74	214	292	506
3	Bali, NTT, NTB	7	11	18	0	0	0	7	11	18
4	Kalimantan	42	61	103	1	4	5	43	65	108
5	Sulawesi	23	29	52	3	6	9	26	35	61
6	Papua, Maluku	4	6	10	2	5	7	6	11	17
	<b>Total</b>	325	394	719	34	74	108	359	468	827

Source: <http://amdal.intakindo.org>

Updated on 5 Juni 2014

539. Unequal distribution of CIAC in Indonesia is clearly shown in the distribution CIAC with economic corridors priority project activities of MP3EI below.

Table 4-17: Distribution of CIAC in Indonesia

Island	Economic Corridor	Number of Effective CCACs			
		ATPA	KTPA	Total	%
Sumatera	Center for production and processing of natural resources and the nation's energy reserves	58	46	104	14%
Java	Driver for national industry and service provision	191	241	432	60%
Bali, NTT, NTB	Gateway for tourism and national food support	7	11	18	3%
Kalimantan	Center for production and processing of national mining and energy reserves	42	61	103	15%
Sulawesi	Center for production and processing of national agricultural, plantation, fishery, oil & gas, and mining	23	29	52	7%
Papua, Moluccas	Center for development of food, fisheries, energy, and national mining	4	6	10	1%
<b>Total</b>		<b>325</b>	<b>394</b>	<b>719</b>	<b>100%</b>

(Data as per June 2014, Intakindo Website)

540. The eastern part of Indonesia such as in Sulawesi, Papua, and Maluku only has the number of CIAC eight percent (8%) of the total CIAC whereas many energy & mining and agricultures priority projects there.

541. Acceleration number of CIAC has been planned by LSK INTAKINDO through revising the competency test method with portfolio scheme. This consideration is expected as one of the ways to increase the number of CIAC.

#### 4.5.4 Weakness surveillance and lack of law enforcement for Certificate Abuse and LPJP

##### Surveillance to CIAC

542. LSK INTAKINDO does surveillance to CIAC through the log book. Each CIAC shall submit a log book to LSK during the certificate validity period (3 years). The log book contains of sustaining experiences of ATPA and KTPA in compiling AMDAL document and other Continuous Professional Development (CPD) activities such as trainings, published papers, participate in relevant seminars and conferences and other relevant activities

543. The log book is a form of supervision conducted by INTAKINDO and just has been implemented since two (2) years ago due to limited budget. Currently, a total of CIAC is eight hundred and twenty seven (827) persons. However, only less than twenty (20) CIACs have submitted the log book. INTAKINDO should confirm the content of the log book during extension of the competency certificate.

544. As for CPD, INTAKINDO provides CPD workshops for renewal KTPA/ATPA certificate on KTPA/ATPA assessment subjects. The workshops are tended as competency assessment subjects refreshing to the KTPA/ATPA and it is compulsory. The refreshing workshop is carried out in two (2) days, the participants are twenty five (25) CIACs in average, the workshop schedule is twice a year. The requirement to participate in the CPD workshop is a CIAC has to have experience in preparing AMDAL document three times after obtaining his/her competency certificate.

### Surveillance to LPJP

545. Assistant Deputy of Standardization and Technology (*Asisten Deputi Standardisasi dan Teknologi Kementerian Lingkungan Hidup dan Kehutanan/ASDEP Stantek*) has a checklist for verification or surveillance to LPJPs during registration and renewing registration. The ASDEP Stantek verifies and checks fullfilness of requirements in the checklist for each LPJP.

546. ASDEP stantek uses the verification checklist during surveillance and the result of surveillance will be used for registration renewal consideration. There are two major verification criteria namely compliance of administration management quality and compliance criteria for EIA document preparation by LPJP. Since 2014 percentage composition for administration and EIA document preparation compliance are each fifty percent (50%). The result of surveillance has categorized LPJP into 'Good', 'Moderate', and 'Poor'. There is no detailed information or criteria on each categorization.

547. The followings table is sample of surveillance result on the three categorizations of LPJP and verification criteria carried out by the ASDEP Stantek.

Table 4-18: Result of Surveillance on LPJPs

No.	Verification Criteria	Categorization of Surveillance Result on LPJPs		
		Good	Moderate	Poor
1.	<b>Administration management quality and personnel</b>			
	a. Legal status of LPJP	Still comply with registration requirements.	Comply with registration requirements.	Comply with registration requirements.
	b. Organization structure	Fulfill the need of LPJP services such as human resources, management, facilities and infrastructure.	Based on the need of LPJP services such as human resources, management, facilities and infrastructure.	Based on the need of LPJP services such as human resources, management, facilities and infrastructure.
	c. Other services (such as architecture, building structure, environmental, water resources, power engineering, survey & mapping, construction management and infrastructure, modeling and coastal zone training, community empowerment).	Have other services.	Has not yet have other services.	Has not yet have other services.
	d. ISO certificate like as 9001: 2008 on quality management system and other certificates.	Has ISO certificate.	LPJP has not the ISO certificate yet. The quality management manual is provided just only for fulfilling the requirement. The manual is not recognized, understood and	LPJP has not yet the ISO certificate

No.	Verification Criteria	Categorization of Surveillance Result on LPJPs		
		Good	Moderate	Poor
			implemented by the staffs.	
	e. Internal audit	Carry-out in every three (3) month as EIA document control.	LPJP does not have the internal audit yet.	LPJP does not have the internal audit yet.
	f. Appoint Quality Assurance (QA)/Quality Control (QC)	LPJP has appointed staff for QA/QC and LPJP have QA/QC implementation mechanism.	LPJP has not yet have the QA/QC.	The quality management manual is provided just only for fulfilling the requirement, the manual is not recognized, understood and implemented by the staffs.
	g. Experiences list of EIA documents	The LPJP has prepared the EIA experiences list.	The LPJP has prepared the EIA experiences list though just fulfilling the requirement, LPJP should prepare mechanism of the experiences list.	The LPJP has prepared the EIA experiences list though just fulfilling the requirement, LPJP should prepare mechanism of the experiences list.
	h. Determine procedure on handling important documents	LPJP has the procedure.	LPJP has no handling procedure yet.	LPJP has no handling procedure yet.
	i. Personnel in EIA document preparation and recruitment procedure	<ul style="list-style-type: none"> <li>• Has certified competency individual consultant for KTPA and ATPA;</li> <li>• Has EIA team staff recruitment procedure for temporary staffs;</li> <li>• Has list of expert based on education background.</li> </ul>	<ul style="list-style-type: none"> <li>• Has certified competency individual consultant for KTPA and ATPA;</li> <li>• Has not yet have EIA team staff recruitment procedure for temporary staffs.</li> </ul>	<ul style="list-style-type: none"> <li>• Has certified competency individual consultant for KTPA and ATPA;</li> <li>• Has no EIA team staff recruitment procedure yet for temporary staffs.</li> </ul>
<b>2.</b>	<b>EIA document preparation process</b>			
	a. Quality test on administration, consistency, in depth and relevancy tests.	The LPJP has carried out those quality tests.	The LPJP has carried out those quality tests.	The LPJP has carried out those quality tests.
	b. Confirmation for whether ARC has license or not.	Confirm the ARC has license.	Confirm the ARC has license.	Confirm the ARC has license.
	c. Carries out EIA submission document mechanism to project proponent and ARC.	LPJP has conducted quality insurance (completeness of administration) and has received forms of administration documents.	LPJP has conducted quality insurance (completeness of administration) and has receipt forms of the administration documents.	LPJP has conducted quality insurance (completeness of administration) and has receipt forms of the administration documents.

#### **4.5.5 Awareness of Importance of AMDAL Document**

548. AMDAL document has not been considered yet as important document in environmental management. Some issues describing how weak awareness of the importance of AMDAL document are:

- Most Project Proponents have not realized yet that AMDAL document is important. AMDAL document is considered limited to bagging other permits only. Project Proponent does not have good will to have qualified AMDAL document for a project/activity;
- Some ARCs do not have good performance in how to review a good AMDAL document;
- AMDAL approved by governor/regent/mayor is a document to obtain other permits like as location permit, whereas Project Proponent has obtained a location permit before AMDAL document presentation in ARC;
- LPJP did not accommodate technical team comments in the revision of AMDAL document.

#### **Area of Expertise of CIAC and Sectoral Registration of LPJP**

##### **Area of Expertise of CIAC**

549. ATPA and KTPA are not specialized yet to area of expertise. However in actual, CIACs have made their specialization on physic-chemistry, biology and social environment. To keep the deepness of EIA document quality, it should consider that ATPA and KTPA should have an area of expertise. The following items can be considered for areas of expertise such as: (1). Air Pollution Monitoring, Prevention & Control; (2) Meteorology, Air Quality Modeling & prediction; (3) Water Pollution Monitoring, Prevention and Control; (4) Land use; (5) Noise & Vibration; (6) Hydrology, Ground Water & Water Conservation; (7) Geology; (8) Soil Conservation; (9) Risk & Hazards Management; (10) Solid & Hazardous Waste Management; (11) Ecology & Biodiversity; and (12) Socio- Economic Aspects.

550. The Study Team conducted interviews with some CIACs from some provinces such as West Java, Central Java, East Java and South Kalimantan. Some CIACs have experience in increasing of AMDAL document preparing after validity of competency certification regulation, and they went to Papua province to prepare AMDAL document. Some CIACs proposed area of expertise for AMDAL compilers.

551. LSK INTAKINDO is considering for area of expertise for CIAC though this consideration is not finalized yet. Consultant proposes organizing an area of expertise of a CIAC when s/he proposes competency certificate extension with attaching his/her CPD of participating in an accredited training center such as air pollution, water pollution, social-economic, etc. A CIAC can have more than one (1) area of expertises and LSK INTAKINDO shall verify his/her CPD. It needs regulations mentioning the requirement of competency certificate extension as similar with AMDAL regulations.

##### **Sectoral Registration of LPJP**

552. Requirements for registration of EIA consultant firm are such as incorporated and has permanent two (2) KTPAs also the registration is not

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sectorial specialized yet. However optional requirements in verification and surveillance checklist of MOEFOR have mentioned other sector services such as building construction and supervision consultant only beside EIA document preparation services, it is not sectorial specialized activities requiring an EIA. The LPJP may have more than one sectorial specialized project area of services as long as the firm ensures that involved KTPA and ATPA in an EIA compiling have matching experience, knowledge and skill with the sector project.

553. Study team has conducted interviews with some project proponents. They considered that it was difficult to get capable LPJP in certainty sectors like toll roads, therefore, registered sector LPJP will ease them to select which LPJP who has many experiences in their expected area

554. To create a good AMDAL compiler it needs a good system involving MOEFOR as a regulator, universities as AMDAL training center and LSK as certification institution. Weak integrated coordination and communication among these stakeholders is taking place. The impartial communication can be shown as there is not a feedback report from LSK to universities related to passing grade of certification applicant from the respective university and competencies weakness of failure applicants.

#### 4.6. Recommendation for Enhancement of Capacity of AMDAL Consultant

##### Before Obtaining Competency Certificate

555. The proposed AMDAL training subject revision is the impact of an activity/project to environmental components such as climate, air quality, water resources, ocean, land use and spatial, soil, water ecosystem, flora-fauna, social environment and community health. The following table is composition of existing AMDAL training subjects and its proposed development that needs to be considered.

Table 4-19: Development of AMDAL Training Subjects for LPKA

No.	Subjects Training	Existing		Proposed to be revised	
		Hour	Percent.	Hour	Percent.
1	Pengarahan progr. Diklat	2	1%	2	1%
2	Jenis keg pemb dan dampaknya	10	5%	10	5%
3	Peraturan	4	2%	4	2%
4	Penapisan dan pelingkupan	20	11%	20	9%
5	Dampak pembangunan dan penanganannya		0%	26	12%
6	Metodologi pengumpulan dan analisa data	4	2%	4	2%
7	Metodologi prakiraan dampak	6	3%	6	3%
8	Metode evaluasi secara holistik dampak lingk	6	3%	6	3%
9	Penyusunan dokumen ANDAL	16	9%	16	8%
10	Pengelolaan dan pemantauan dampak lingk	6	3%	6	3%
11	Etika lingk	4	2%	4	2%
12	Praktek lapangan	40	22%	40	19%
13	Penyusunan dokumen	50	27%	50	24%
14	Presentasi	10	5%	10	5%
15	Evaluasi	8	4%	8	4%
	Total	186	100%	212	100%

556. Competency test questions shall reflect AMDAL training materials

557. It requires integrated, regular and intensive communication and coordination among KLH, LSK and LPKA. This communication and coordination are aimed to review, discuss and evaluate the needs and challenges in creating a qualified AMDAL document associated with AMDAL compilers. It requires yearly meeting among those institutions as well.

558. It requires training for ARC related with how to assess a qualified AMDAL document. Most ARCs do not understand yet depth criteria of the AMDAL quality document, practical training for AMDAL document assessment is necessary.

559. Portfolio scheme (interview and study case) planned by LSK INTAKINDO can be considered as one of method to increase the number of CIAC.

### **After Obtaining Competency Certificate**

560. Ethic commission is considered to be established to overcome integrity violations conducted by government officers (ARC, government institution as Project Proponent and governor/regent/mayor) and private offices (LPKA, LPJP and CIAC).

561. Ombudsman is an option to handle integrity violations conducted by government officers. Ethic commission should be established to cope integrity violations from private officers. As for ombudsman, the institution that has been existed, it needs formulation of a grievance mechanism.

562. As for new ethic commission organization, the commission can be considered from association of BKPSL, FAI, INKALINDO and will be led by BKPSL because of organization continuity and cost reasons. The formulation of ethic commission organization needs decision letter from at least echelon 1 level officer.

### **Future Enhancement of Capacity of CIAC and LPJP**

#### **Area of Expertise of CIAC**

563. The items followed can be considered for area of expertise: (1). Air Pollution Monitoring, Prevention & Control; (2). Meteorology, Air Quality Modeling and Prediction; (3). Water Pollution Monitoring, Prevention and control; (4). Land use; (5). Geology Noise and Vibration; (6). Hydrology, Ground Water and Water Conservation; (7). Geology; (8). Soil Conservation; (9). Risk and Hazards Management; (10). Solid and Hazardous Waste Management; (11). Ecology and Biodiversity; and (12). Socio- Economic aspects.

564. The MOEFOR should determine requirements of each area of expertise for an applicant. The following table shown requirements for some areas of expertise that can be considered.

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Table 4-20: Requirements for Some Areas of Expertise

No.	Requirements	Area of Expertise		
		Land use	Air pollution monitoring, prevention and control	Hydrology, ground water and water conservation
1	Education qualification	<p>a. Engineering: civil engineering/ physical planning/ architecture/ town planning/ environmental planning/ environmental engineering; or</p> <p>b. Science: geo-informatics/ remote sensing/GIS/ environmental management; or</p> <p>c. Others: post-graduated in science subjects and bachelor degree in technical subject above.</p>	<p>Engineering: environment/ chemical/ mechanical/ civil/ mining; or</p> <p>a. Science: environmental science/ environmental management/ environmental study/ industrial pollution control/ physic/chemistry.</p>	<p>a. Civil/mining; or</p> <p>b. Science: geology/ applied geology/ geophysics/ hydrology/ surface hydrology/ hydrogeology/ water resource management.</p>
2	Experiences	<ul style="list-style-type: none"> <li>- Data generation and analysis on land use pattern;</li> <li>- Developing land use map for urban, semi-urban and rural;</li> <li>- GIS based land use analysis and development;</li> <li>- Assessing environmental impacts of projects development using land use data/information;</li> <li>- Has knowledge in environmental regulation and understanding of policies, guideline and regulation related to land use;</li> <li>- Contribution to EIA preparation.</li> </ul>	<p>Air pollution monitoring:</p> <p>a. Meteorology: measurement of wind speed, wind direction, relative humidity, wet &amp; dry temperature, rainfall, etc.;</p> <p>b. Air quality monitoring, suspended particulate matter, SO<sub>2</sub>, NO<sub>x</sub>, CO, hydro-carbons, VOCs;</p> <p>c. Stack monitoring: particulate matter, NO<sub>x</sub>, and other relevant parameters;</p> <p>d. Inventory of Green House Gas emissions.</p> <p>Air pollution prevention &amp; control:</p> <p>a. Reduction in process emission at source;</p> <p>b. Reduction in fugitive emissions;</p> <p>c. Design and installation of emission control system including identification, assessing emission</p>	<p>a. Analysis of surface hydrological data of flow fluctuation, flow estimation at 10, 50 and 90 percentage levels, setting up and interpretation of gauging station reading, design of ground water table measurement and monitoring network, computation of ground water recharge, flow rate and direction;</p> <p>b. Plotting of ground water contours;</p> <p>c. Analysis and description of aquifer characteristic such as permeability, storage coefficient, estimation of ground water potential and recharge phenomenon, determination of impact of</p>

No.	Requirements	Area of Expertise		
		Land use	Air pollution monitoring, prevention and control	Hydrology, ground water and water conservation
			and design air pollution control system; d. Understanding of policies, guideline and regulation related to air pollution; e. Contribution in EIA report preparation.	withdrawal of groundwater; d. Has knowledge of EIA regulation and understanding of policies, guidelines and regulation related to ground water.
3	Training (preferable)	Specialized training in preparation of land use map, cartography and spatial planning (i.e. GIS, remote sensing, etc.).	Air pollution measurement, prevention, monitoring, air pollution or control equipment	Impact on hydrology and ground water caused by project development

### Improvement of LPJP Registration

565. Sectoral registration for EIA Consultant Firm in the future have to be considered. MOEFOR has made sectoral activities/projects requiring EIA in MOER No. 5/2012 for there are fourteen (14) main sectoral activities. The sectors that can be considered to be area sectoral for EIA Consultant Firm registration are as follow.

Table 4-21: Proposed Activities Sectors

No.	Sectors	Sub-sectors
1.	Infrastructures	1. Multi-sectors (a) Reclamation of coasts and small islands; (b) Hill cutting and embankment area; (c) Raw clean water tapping from lake, river, spring or other surface waters; (d) Groundwater tapping (shallow and deep well); (e) Construction of buildings.
		2. Defense (a) Construction of Navy base; (b) Construction of Air Force base; (c) Construction of battle training center.
		3. Transportation (a) Construction of railway with or without train station; (b) Construction of land transportation terminals for passenger and cargo; (c) River and sea dredging; (d) Construction of seaport with wharf, breakwater and floating facilities; (e) Construction of airport.
		4. Public Works (a) Construction of dam and reservoir; (b) Construction of irrigation area; (c) Development of swamp, swamp reclamation for irrigation area;

No.	Sectors	Sub-sectors
		<ul style="list-style-type: none"> <li>(d) Construction of coastal protection and improvement of river estuary;</li> <li>(e) River normalization includes river realignment and construction of flood canal;</li> <li>(f) Toll road construction and upgrading requiring land acquisition;</li> <li>(g) Road construction and widening requiring land acquisition;</li> <li>(h) Construction of subway/underpass, tunnel, flyover and bridge;</li> <li>(i) Construction of solid waste treatment facilities;</li> <li>(j) Construction of wastewater treatment plant;</li> <li>(k) Construction of drainage canal;</li> <li>(l) Construction of clean water supply network.</li> </ul>
		5. Housing and Settlement Area <ul style="list-style-type: none"> <li>(a) Construction of housing and settlement areas.</li> </ul>
		6. Tourism <ul style="list-style-type: none"> <li>(a) Tourism areas and recreation parks;</li> <li>(b) Golf course.</li> </ul>
2	Agro- industrial Projects	1. Agriculture <ul style="list-style-type: none"> <li>(a) Food crop cultivation;</li> <li>(b) Horticulture cultivation;</li> <li>(c) Estate cultivation.</li> </ul>
3	Fisheries	1. Fisheries and marines <ul style="list-style-type: none"> <li>(a) Fisheries cultivation business, advanced technology shrimp/fish pond;</li> <li>(b) Floating fisheries cultivation business.</li> </ul>
4.	Forestry	1. Forestry <ul style="list-style-type: none"> <li>(a) Wood forest product utilization business (<i>Usaha Pemanfaatan Hasil Hutan Kayu/UPHHK</i>) from natural forest;</li> <li>(b) UPHHK from trees forest.</li> </ul>
5.	Satellite	1. Satellite Technology <ul style="list-style-type: none"> <li>(a) Construction and operation of air space;</li> <li>(b) Construction of rocket facilities in land and other purposes;</li> <li>(c) Construction of rocket propellant facilities;</li> <li>(d) Construction of rocket manufactory;</li> <li>(e) Construction of static test facilities and rocket launching facilities.</li> </ul>
6.	Industries	1. Industrial <ul style="list-style-type: none"> <li>(a) Clinker cement industry;</li> <li>(b) Pulp industry from tress industry;</li> <li>(c) Upstream petrochemical industry;</li> <li>(d) Industry areas;</li> <li>(e) Shipyard industry graving dock system;</li> <li>(f) Ammunition and explosive propellant industries;</li> <li>(g) Lead smelting industry;</li> <li>(h) Industry activity in office or rural area with certain areas.</li> </ul>
7.	Energy and Mineral Resources	1. Energy and mineral resources <ul style="list-style-type: none"> <li>(a) Mineral and coal exploitation (production);</li> <li>(b) Coal exploitation (production);</li> <li>(c) Metal mineral exploitation (production);</li> <li>(d) Non-metal mineral or rock mineral exploitation (production);</li> <li>(e) Processing and refining;</li> <li>(f) Radioactive mineral exploitation (production);</li> <li>(g) Mining at sea;</li> <li>(h) Tailing placing at submarine;</li> <li>(i) Petroleum and natural gas exploitation and production development;</li> <li>(j) Piping of petroleum, natural gas, and fuel oil at the sea;</li> <li>(k) Refining construction;</li> <li>(l) Regasification terminal;</li> <li>(m) Lubricating oil refinery;</li> </ul>

No.	Sectors	Sub-sectors
		<p>(n) Development of Coal Bed Methane (CBM)/coal methane gas.</p> <p><u>Electricity</u></p> <p>(o) Transmission development;</p> <p>(p) Development of electrical power plants such as Diesel Electrical Power Plant (<i>Pembangkit Listrik Tenaga Dese/PLTD</i>)/ Gas Electrical Power Plant (<i>Pembangkit Listrik Tenaga Gas/PLTG</i>) / Steam Electrical Power Plant (<i>Pembangkit Listrik Tenaga Uap/PLTU</i>)/Gas and Steam Electrical Power Plant (<i>Pembangkit Listrik Tenaga Gas dan Uap/PLTGU</i>), Hydro Electrical Power Plant (<i>Pembangkit Listrik Tenaga Air/PLTA</i>), Solid Waste Electrical Power Plant (<i>Pembangkit Listrik Tenaga Sampah</i>), other power plants such as with the sun and wind energy.</p> <p><u>New and renewable energy</u></p> <p>(q) Geothermal on exploitation stage;</p> <p>(r) Biofuel refinery development.</p>
8.	Nuclear	<p>1. Nuclear</p> <p>(a) Construction and operation of nuclear reactor such as power and non-power reactors;</p> <p>(b) Construction and operation of non-reactor nuclear plant;</p> <p>(c) Construction and operation of radioactive waste treatment plant;</p> <p>(d) Radio-isotope production.</p>
9.	Hazardous and Toxic Waste (B3)	<p>1. Hazardous and Toxic (B3) waste management</p> <p>(a) Hazardous waste treatment services industry combines two hazardous treatment activities such as hazardous utilization and hazardous treatment and hazardous waste storage;</p> <p>(b) Hazardous waste utilization;</p> <p>(c) Hazardous waste treatment;</p> <p>(d) Hazardous waste storage.</p>

Sources: modification consultant from MOER No. 5/2012

#### 4.7 Roadmap for Enhancement Capacity of AMDAL Consultant

Table 4-22: Roadmap of Enhancement Capacity of AMDAL Consultant

No.	Challenges	Target	Strategy		Operation Policy	Executing Institutions
			2015 - 2020	2020 - 2025		
1.	Curriculum gap between AMDAL training subjects and competency assessment subjects.	Equip applicant of AMDAL compiler with capacity on predict impact of an activity/project to environmental components.	Add environmental impact subject to AMDAL training curriculum through development of existing curriculum.		Prepare development of AMDAL training curriculum.	KLH, PUSDIKLAT
2.	Partial coordination and cooperation among KLH, LSK and LPKA.	Integrated coordination and cooperation among KLH, LSK and LPKA is formed to discuss the needs and constraints in creating a qualified AMDAL compiler.	Conduct joint meeting among KLH, LSK and LPKA to decide a proper time for regular meeting and discussion.		Set and decide yearly joint meeting.	KLH, LSK and LPKA
3.	Poor performance of ARC in assessing AMDAL document.	ARCs understand content of qualified AMDAL document.	Implement practical training on how to assess a qualified AMDAL document for ARC.		Plan practical AMDAL training schedules.	KLH, BLHDs, ARCs
4.	Integrity violations conducted by government officers like as authority abuse.	Implement low enforcement for integrity violations.	Discuss with related stakeholders in formulating grievance mechanism to ombudsman and grievance management (complaint receiving and solving process) .		Plan formulating grievance mechanism.	KLH
5.	Integrity violations conducted by private like as certificate abuse.	Establish ethic commission.	Discuss and coordinate with related stakeholders in establishing ethic commission related to		Establish ethic commission	KLH, BKPSL, FAI, LSK, LPKA

No.	Challenges	Target	Strategy		Operation Policy	Executing Institutions
			2015 - 2020	2020 - 2025		
			where should the commission attach, what is role of the commission , etc.			
		Implement low enforcement for integrity violations	Discuss with related stakeholders in formulating grievance mechanism to ethic commission and grievance management (complaint receiving and solving process).		Plan formulating grievance mechanism.	KLH, LSK, LPJP, LPKA, CIAC
6.	Area of Expertise	Certified AMDAL consultants are recognized by area of expertise.	<ul style="list-style-type: none"> <li>Review and analyze implementation of area of expertize for certified AMDAL consultant;</li> <li>Set area of expertise in requirement of competency certification.</li> </ul>	<ul style="list-style-type: none"> <li>Regulation articulating requirement of area of expertise is needed.</li> </ul>	<ul style="list-style-type: none"> <li>Plan implementation of area specialty of certified AMDAL consultant;</li> <li>Issue regulation on requirement of area of expertise.</li> </ul>	KLH, LSK, BKPSL, LPKA
7.	LPJP sector registration	LPJPs are registered by sector activities.	<ul style="list-style-type: none"> <li>Review and analyze implementation of registration LPJPs by sector activities;</li> <li>Set sector activities in requirement of LPJP registration.</li> </ul>	<ul style="list-style-type: none"> <li>Regulation articulating requirement of sectoral LPJP registration.</li> </ul>	<ul style="list-style-type: none"> <li>Plan implementation of registration of LPJP by sector activities;</li> <li>Issue regulation on requirement of sectoral LPJP registration.</li> </ul>	KLH

# **CHAPTER 5**

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## CHAPTER 5 STRENGTHENED TECHNICAL CAPACITY FOR REVIEW OF AMDAL (EIA) REPORTS (OUTPUT 4)

### 5.1 Introduction

566. The AMDAL document quality at national and regional levels including both with and without donor assistance (KA ANDAL, ANDAL, RKL and RPL) is affected by many factors, such as the qualification of AMDAL Consultant, AMDAL Review Commission (ARC), available data and information about the project by the Project Proponents as well as budget for implementing the AMDAL.

567. As one of the important aspects in improving the AMDAL documents, improvement of the ARC especially on its Technical Team is expected to upgrade the AMDAL document review process, either in preparing the sound arguments for decision-making process in ARC or in providing input or comments for the AMDAL Consultants and the Project Proponent. The unequal distribution of the experienced experts especially in the eastern part of Indonesia such as in Papua and in other remote areas is enlarging the gaps between the capability of the Technical Team in the big cities mostly in Java Islands with another. One of the ideas to improve the quality and capability of the Technical Team is by outsourcing the reliable and qualified experts as the member of the Technical Team. One alternative for improving the Technical Team especially for the projects in the remote areas is by having experts who are competent in reviewing the scientific and technical context. The availability of sector-specific pool of experts for the Technical Team is expected to improve the quality of the Technical Team.

### 5.2 Methodology

568. Approaches to strengthen AMDAL Review Commissions (ARCs) in the assessment of AMDAL report are as follow :

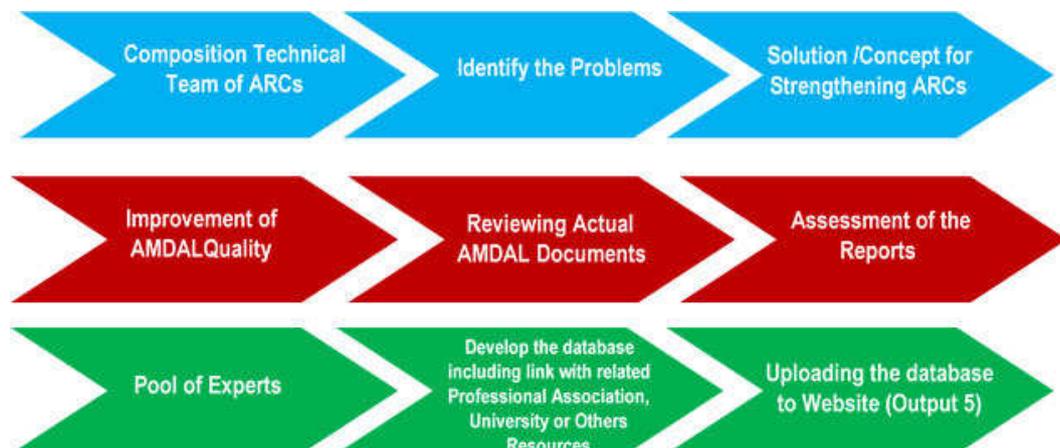


Figure 5-1: Approach to Obtain Output No. 4

569. Fact findings about composition of the technical team in the AMDAL Review Commission (ARCs) related to a number of technical team members, kind of expertise and their educational background.

570. Further concept development for the Technical Team is including specific tasks and outputs of team members, recruitment criteria, sources or experts, indicative cost incurred, etc.

571. Reviewing the quality of AMDAL documents by referring to the existing regulations especially for consistency, compliance, relevance and depth of AMDAL documents.

572. Assisting the MOEFOR to initiate creating pools of experts in supporting Technical Team, as an effort for the capacity improvement of ARCs. A commitment from certification organizations concerning utilization of their certified professional is aimed to support AMDAL Team/Consultants and Technical Teams. The database of experts shall be developed to fill the gaps in experts lack, especially for some remote and hinterland areas. Link to the professional association such as IAGI/*Ikatan Ahli Geologi Indonesia* (geologist), IAP/*Ikatan Ahli Perencana* (engineering design), etc; shall enhance the capacity improvement. The interview will be conducted with related professional association. The database shall be uploaded to the website as output of No. 5.

573. Obtaining data from the Assistant Deputy of Environmental Impact Assessment of the Ministry of Environment for evaluating ARCs performance by concerning requirement of Technical Team, quality of AMDAL Document and administration of AMDAL process.

574. The selection of expert needs criteria, source and, finally, listed pool of expert to be uploaded to the website.

### **5.3 Visits and Interview Surveys**

575. The Consultant conducted several visits to the following Local Environmental Agency or *Badan Pengelolaan Lingkungan Hidup Daerah* (BPLHD)/*Badan Lingkungan Hidup Daerah* (BLHD) that assesses the AMDAL documents, such as:

- a. BPLHD of West Java Province;
- b. BLH of Bogor Regency;
- c. BPLHD of DKI Jakarta Province;
- d. BLH of Banten Province;
- e. BLHD of South Tangerang City.

### **5.4 AMDAL Review Commission (ARC)**

576. The tasks and functions of ARC is, as specified in the regulation of Minister of Environment No. 8/2013 concerning Guidelines for the Assessment and Examination of Environmental Documents and the Issuance of Environmental Permit ("MOER No. 8/2013"), to give recommendations on the environmental feasibility or non-feasibility of an activity or a project to the governor/regent/major in accordance to the authority based on the results of AMDAL documents (ANDAL and RKL-RPL) review or assessments.

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577. The ARC consists of Head, Secretary and Members. The Head and Secretary shall be from the Environmental Office either from central government (Echelon I or equivalent officer for Head and Echelon II or equivalent officer for the Secretary), provincial office (Echelon II or equivalent officer for the Head and Echelon II or equivalent officer for the Secretary) or regency/city office (Echelon II or equivalent officer for the Head and Echelon II or equivalent officer for the Secretary). Members of the ARC shall be the central office, province or regency/city office those who have the authority to make the decision which is approved by the official letter of assignment from his/her institution.

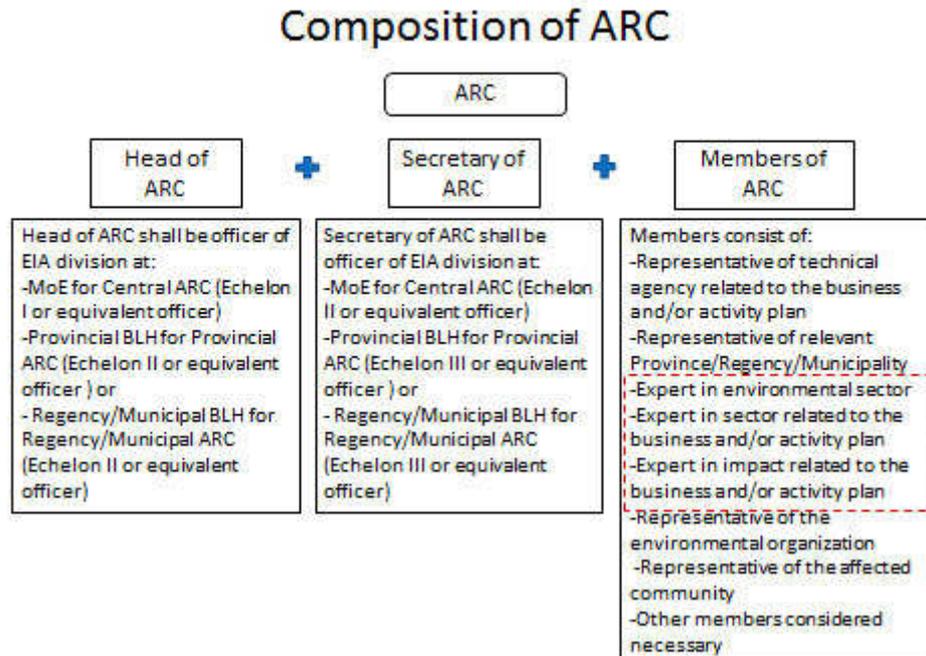


Figure 5-2: AMDAL Review Commission Organization

578. ARC is assisted by the Technical Team and Secretariat of ARC in implementing its tasks and functions. The Technical Team is established by the minister/governor/regent/major depended on their authority. The Technical Team consists of the Head of Technical Team and members who shall be the experts from the related technical ministry of the proposed activity or project, environmental specialist from the environmental office and independent experts with specific field that related to the proposed activity or project or their associated impacts.

579. ARC who shall review the AMDAL documents shall have the license. The requirements and procedures to obtain the license for the ARC are specified in the Minister of Environment Regulation (MOER) No. 15/2010.

580. To determine the performance of provincial and/or regency/city ARCs that has obtained the license on AMDAL review process, therefore, in accordance with the mandate of Article 64 Clause (1) and Article 66 Clause (1) to Government Regulation (GR) No. 27/2012 regarding Environmental Permit, MOEFOR is mandated to conduct training and performance evaluation of the AMDAL review carried out by the provincial and/or regency/city ARCs.

581. Focus of guidance and supervision on the performance of Regional ARCs is set in MOER No.25/2009 regarding Guidance and Supervision of Regional ARCs, which includes the following:

- a. ARCs license requirements (according to MOER No. 15/2010 and GR No. 27/2012);
- b. AMDAL document quality (according to MOER No. 8/2013 regarding Guidelines for the Assessment/Review and Examination of Environmental Documents and the Issuance of Environmental Permit);
- c. AMDAL Process Administration (according to MOER No. 8/2013);

## **5.5 ARC's License**

582. The requirements for obtaining the license for the ARC is specified in Article 2, Sub-Clause (5) of MOER No. 15/2010 as below:

- Head of the ARC shall be minimum Echelon II officer or equivalent;
- Having secretariat of ARC at the environmental office or institution in central, province or regency/city;
- Having the technical team members (minimum 2 persons) who have passed AMDAL compiler training and minimum three (3) members who have participated in the AMDAL assessment training that specialized on either bio-geophysic-chemical, economic, social, culture, health, regional development planning and environmental fields;
- Having the NGO and/or environmental organization as member of ARC;
- Having cooperation with an accredited laboratory to examine at minimum water and air parameters.

583. The issuance of a license for the ARC by the governor or regent/major shall be done in accordance to the Attachment I of the MOER No. 15/2010 in accordance to their authorised area. The validity of the license is three (3) years and shall be renewed at the latest before thirty (30) working days before the expired date of the license.

584. In accordance to the regulation, the license can be revoked if: a). there is an evidence that shows that the submitted requirements for license applications is fake or untrue; b). there is a change that caused the incompliance of the requirements for the applications; c). any change that resulted the incompliance of the application's requirements is not fulfilled within six (6) months; d) violence the administration of AMDAL process and/or five (5) AMDAL documents that have been decided as feasible but seriously impacted to the environment based on the AMDAL standard test, after the supervision and monitoring have been made for 1 (one) year.

585. According to data from the MOEFOR in 2013, there are thirty three (33) provinces and two hundred and five (205) out of five hundred and five (505) regencies/cities throughout Indonesia that have ARC licenses.

586. MOEFOR has evaluated the performance of thirty three (33) provincial ARCs and fifty one (51) regencies/cities ARCs in 2013. It is noted that MOEFOR has implemented supervision and evaluation of regency/city ARCs license since 2011-2013. At the end of 2013, MOEFOR has implemented the supervision and evaluation to one hundred and seventy nine (179) regencies/cities ARCs out of two hundred and five (205) regencies/cities ARCs that have a license.

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Remaining twenty six (26) regencies/cities/ARCs those have not been supervised and evaluated by MOEFOR.

587. Six (6) criteria as basis for MOE to evaluate the fulfillment of ARC license requirements are Head of ARC, Secretariat of ARC, Technical Team, Experts, NGOs and Laboratory. Each criteria is given weighting score as follows:

Table 5-1: Criteria and Weighting Score for the Evaluation of Regional ARCs in 2013

Evaluation Criteria	Weighting/Scoring
Head of ARC	5
Having the Secretariat for ARC	25
Technical Team (2 Compilers and 3 Assessors)	30
Having the experts on biogeophysic-chemical, economic, social, culture, health, regional development planning and environmental.	25
Availability of NGO as the member of ARC	10
Cooperation with accredited laboratory or ability to test water and air parameters	5

Source: Evaluation and Follow up Action Division, MOEFOR

588. Regarding with weighting score toward the six criteria, the highest weighting of thirty (30) points is charged with technical team for the assessor quality and capability are very important in the assessment of AMDAL documents. The second highest weighting of twenty (25) points is for each of the performances of ARC Secretariat (for administration process) and expertise experts (for AMDAL document quality test).

589. From the weighting score above, it can be concluded that the 3<sup>rd</sup> criteria are greatly affecting the quality of AMDAL documents generally since they required to be strengthened and improved

590. Based on the evaluation towards the fulfillment of provincial/regency/city ARC license requirements mentioned above, MOEFOR obtains the following results:

Table 5-2: Results of the Regional ARCs Evaluation in 2013

Fulfillment of Requirements Criteria	Provincial ARCs	Regency/City ARCs
Head of ARC	97%	94%
Having the Secretariat for ARC	97%	94%
Technical Team (2 Compilers and 3 Assessors)	94%	86%
Having the experts on biogeophysic-chemical, economic, social, culture, health, regional development planning and environmental	91%	82%
Availability of NGO as the member of ARC	88%	76%
Cooperation with accredited laboratory or ability to test water and air parameter	94%	82%

Source: Evaluation and Follow up Action Division, MOEFOR

591. Result of MOEFOR evaluation related to fulfilment of the requirements of thirty three (33) provincial ARCs and fifty one (51) regencies/cities ARCs shows that most of them have met the requirements. Only a few of provincial ARCs do not meet the requirements for NGOs and some of regencies/cities ARCs do not meet the requirements for NGOs, laboratories and experts.

592. MOEFOR classifies their evaluation results regarding the fulfillment of license requirements for thirty three (33) provincial ARCs and fifty one (51) regencies/cities ARCs into four (4) categories as follows:

Table 5-3: Result of ARCs Performance at Province and Regency/City in 2013: Fulfillment of Requirements for AMDAL Review Commissions (ARCs) License

No	Fulfillment of Requirements for ARCs License	Provincial ARCs		Regency/City ARCs	
		Evaluation Result	%	Evaluation Result	%
1	Excellent	22	67	34	67
2	Good	7	21	6	12
3	Fair	2	6	6	12
4	Poor	2	6	5	9
Total		33	100	51	100

593. MOEFOR addressed category "Excellent" to twenty two (22) provincial ARCs at Aceh, Bengkulu, Jambi, Bangka Belitung Islands, Lampung, South Sumatera, North Sumatera, North Sulawesi, Central Sulawesi, Southeast Sulawesi, North Maluku, South Kalimantan, East Kalimantan, Central Kalimantan, East Java, West Java, D.I.Yogyakarta, Bali, NTT, NTB, Papua, and West Papua, as well as to those thirty four (34) regencies/cities ARCs at Aceh Singkil, North Bengkulu, Central Bangka, Bandar Lampung City, Rokan Hulu, Ogan Komering Ilir, Ogan Komering Ulu, Wajo, Minahasa, Poso, Central Halmahera, Sambas, Kubu Raya, Banjarmasin City, Barito Kuala, East Kutai, Berau, North Barito, Palangka Raya City, Lamongan, Karawang, Purwakarta, Serang, Cilacap, Klungkung, Badung, Central Lombok, Jayapura, Jayapura City, Sorong, Sorong City, Samosir, Malang City, and Sukoharjo.

594. Category "Good" is addressed to seven (7) provincial ARCs at West Sumatera, West Kalimantan, Riau, South Sulawesi, Gorontalo, Banten and Central Java and to those six (6) regency/city level at South Lampung, Lima Puluh Kota, East Bolaang Mongondow, Tanjung Pinang City, Rokan Hilir and Pasaman.

595. Category "Fair" is addressed to two (2) provincial ARCs at DKI Jakarta and Maluku as well as to six (6) regencies/cities ARCs at Central Tapanuli, Kota Tidore Islands, South Bangka, Kolaka, Timor Tengah Selatan and East Lombok. Category "Poor" is addressed to two (2) provincial KPAs at West Sulawesi and Riau Islands and to five (5) regencies/cities ARCs at Ngada, Makassar, Sikka, Lebak and South Konawe.

596. Based on the result of evaluation by MOE in 2013 related to fulfillment of ARC license requirements, most of ARCs that located farther from central government are more obedient to perform their task and function properly



601. The following table describes a complete KA-ANDAL assessment procedure that includes responsible parties and supporting documents for each process. For example, the secretariat receives KA-ANDAL documents from proponent and issues acknowledgement of receipt (documents). They will then continue to process of administrative check by using an administrative check form. If the proponent has not yet fulfilled all the administrative requirements, the document will be returned to them. Once all requirements fulfilled, ARC will assign technical team to conduct the assessment, and KA approval letter as the final process.

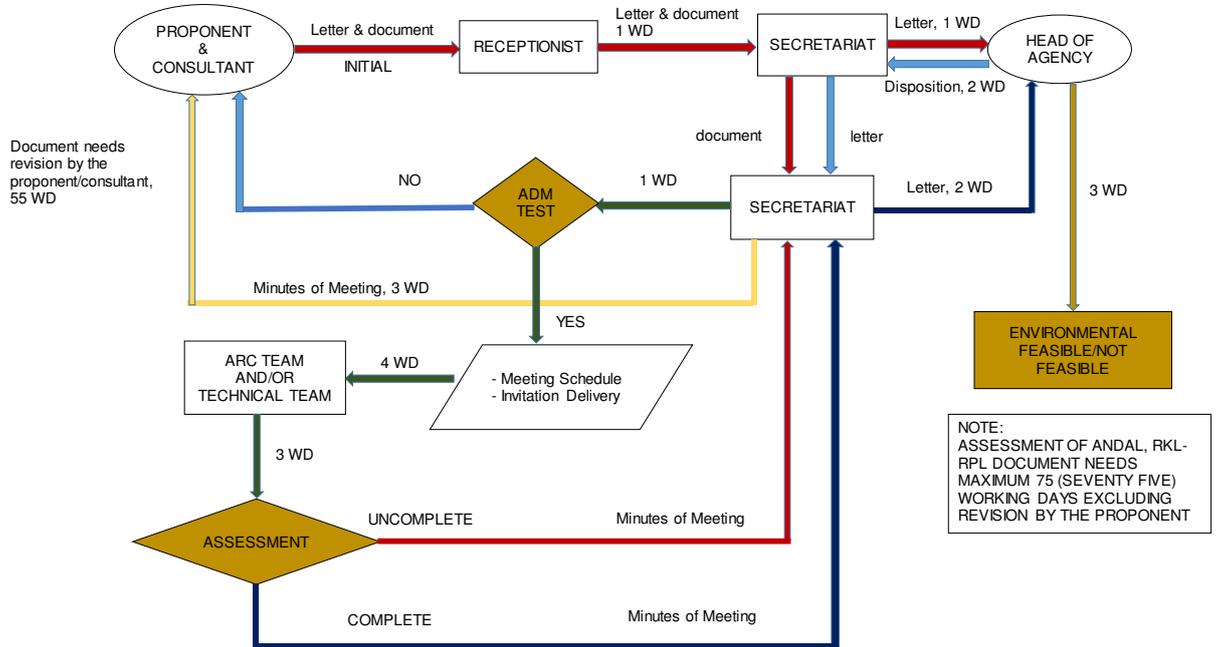
Table 5-4: KA-ANDAL Assessment Procedure

Responsible Parties	Process	Supporting Document
Secretariat	Receive KA-ANDAL Document from Proponent	Acknowledgement of Receipt (Documents/Letters)
Secretariat	Check the administration for KA-ANDAL document	Administrative Check Form for KA-ANDAL Document
Return to Proponent	Completed	
ARC	Assign Technical Team to assess KA	Meeting Invitation
Technical Team	Assess the KA	Written Comment Form Minutes of Meeting Form
Secretariat	Provide KA Assessment Result	Assessment Meeting Minutes Form
ARC	Issue KA Approval Letter	KA Approval Letter

Source: BPLHD West Java Province

602. Flow and mechanism of ANDAL and RKL-RPL assessments by BPLHD West Java Province is shown in the following figure. The flow shows that BPLHD West Java Province has set period for each process to be followed starting from receiving document until providing recommendation results whether the action plan is environmentally feasible or not. For a complete document and not required any revision, the assessment process only takes

seventeen (17) working days. If any revision needs to be made, the proponent/consultant will be given fifty five (55) working days. Maximum period for the ANDAL and RKL-RPL assessments document is seventy five (75) working days excluding period for revision.



Source: BPLHD West Java Province

Figure 5-4: Flow and Mechanism of ANDAL, RKL & RPL Assessment

603. A complete ANDAL and RKL-RPL assessment procedure that consists of responsible parties and supporting documents for each process is shown below. Firstly, the secretariat receives KA-ANDAL documents from proponent and issues acknowledgement of receipt (documents). Secondly, they continue checking administrative requirements by using administrative check form. If the proponent has not yet fulfilled all the administrative requirements, the document will be returned to them. Once all requirements fulfilled, ARC will assign technical team to conduct the assessment and give written comments in the form provided. The last process is recommendation results from ARC whether the activities plan is environmentally feasible or not.

Table 5-5: ANDAL and RKL-RPL Assessments Procedure

Responsible Parties	Process	Supporting Document
Secretariat	Receive application for ANDAL and RKL-RPL assessment	Acknowledgement of Receipt (Documents/Letters)
Secretariat	Check the administration for ANDAL, RKL-RPL	Administrative requirements check form
Return to Proponent	Complete	
ARC	Request Technical Team to conduct ANDAL and RKL-RPL Assessment	Meeting Invitation
Technical Team	Asses the ANDAL and RKL-RPL document	Written Comment Form Minutes of Meeting Form
ARC	Provide ANDAL and RKL-RPL Assessment Result	Assessment Meeting Minutes Form
ARC	Recommendation	Recommendation Letter

Source: BPLHD West Java Province

604. In addition, BPLHD West Java Province also provides technical assistance to relevant SKPDs as members of the technical team for improving their understanding of AMDAL assessment inform of socialization of new AMDAL regulations and motivates them to issue new related policies as well. This is aimed to establish a maximum ARC performance.

605. BPLHD West Java establishes their assessment procedures for KA-ANDAL, ANDAL and RKL-RPL based on the AMDAL review procedures in MOER No.8/2013 as discussed in Section 5.7.

## 5.7 AMDAL Review Procedures

606. The review of AMDAL Document procedures has been specified in MOER No. 8/2013. Concerning Guidelines for the Review and Examination of

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Environmental Documents and the Issuance of Environmental Permit shall be done through the following phases:

- Receiving the KA document and administrative review;
- Technical review of KA;
- KA approval;
- Receiving the ANDAL, RKL-RPL documents and environmental permit application;
- Technical review of ANDAL and RKL-RPL;
- Review of environmental feasibility based on ANDAL and RKL-RPL;
- Submission of recommendations on environmental feasibility.

607. The administrative review of the KA documents shall be done by the Secretariat of ARC. The guideline for administrative assessment is stipulated in the MOER No. 8/2013 (Guideline No. 01). Based on the results of the administrative review on the compliance of the requirements as stipulated by the regulations, then the ARC Secretariat issues a written statement whether the application for KA approval have been fully complied or not with the administrative requirements. If all the administrative requirements have been fully complied, then the Secretariat of ARC shall inform to the Head of ARC and prepare the letter for commencing the technical assessment to the Technical Team.

608. The Technical Team member shall conduct the technical assessment independently after they receive the KA before Technical Team formal meeting is held. The KA assessment shall be done through two (2) types of review:

- a. Review of the project staging, covers the review on the confirmity of the site location plan with the spatial planning (RTRW) and other applicable regulatory requirements and phase of the activity or the project when AMDAL Study is done. The guideline is specified in the above regulation in Guideline No. 03.
- b. Quality Review, covers the review on the consistency, compliance and depth of the documents. The guideline is specified in the above regulation in Guideline No. 04.

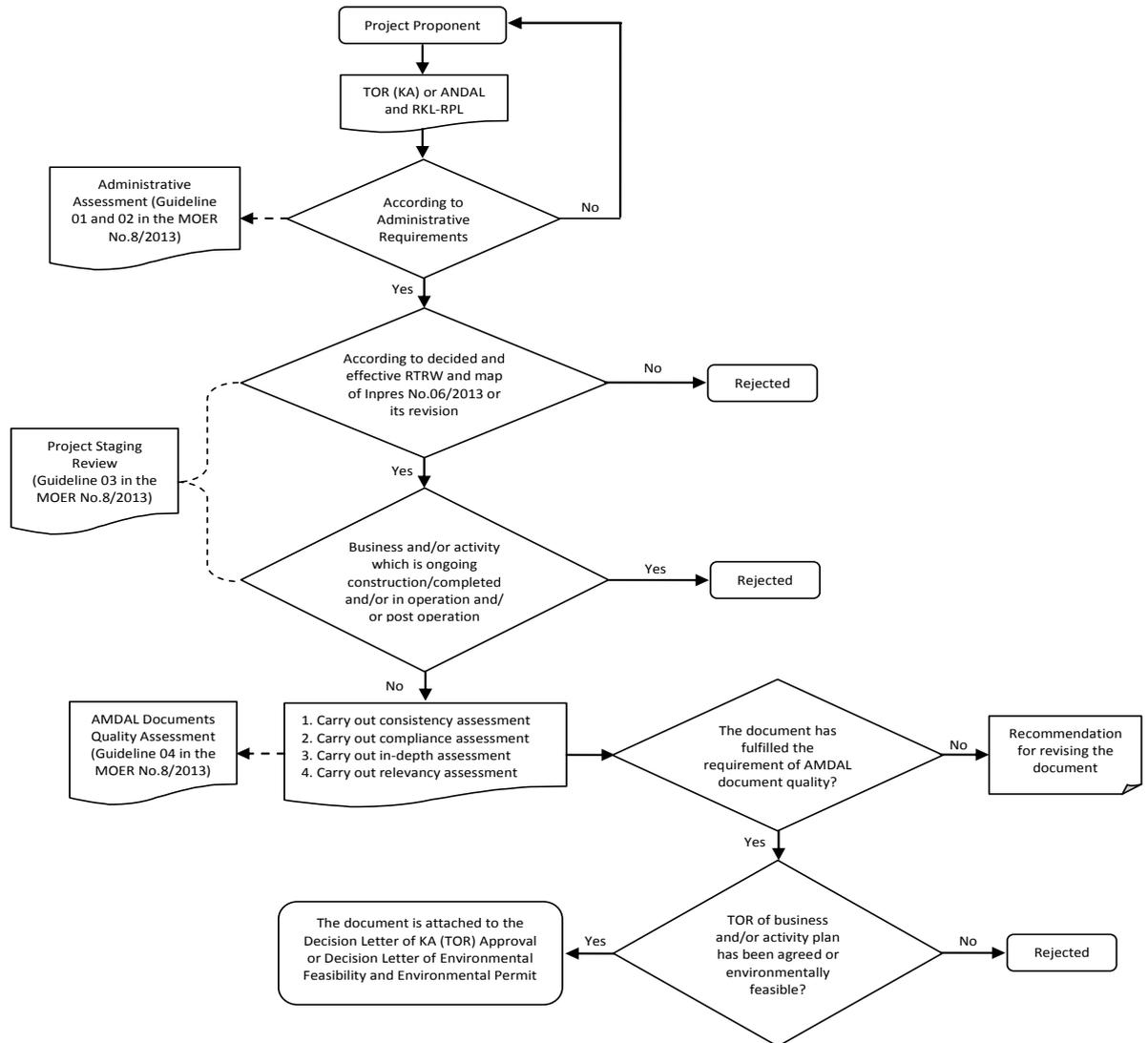


Figure 5-5: AMDAL Document Review Procedures Refer to the MOER No.8 of 2013

609. By showing the above scheme, it is clear that the roles of the ARC to improve the quality of AMDAL Document is essential. The quality of AMDAL Document is not merely depending on the quality of its AMDAL Consultant, but also depending on the quality of its ARC. The higher quality of the ARC especially the Technical Team qualification shall significantly affect to the quality of the AMDAL Document.

610. The following figure shows detailed tasks of the ARC (Secretariat, Technical Team and Head of ARC) in implementing the review of AMDAL Document based on MOER No. 8/2013 (Attachment VI).

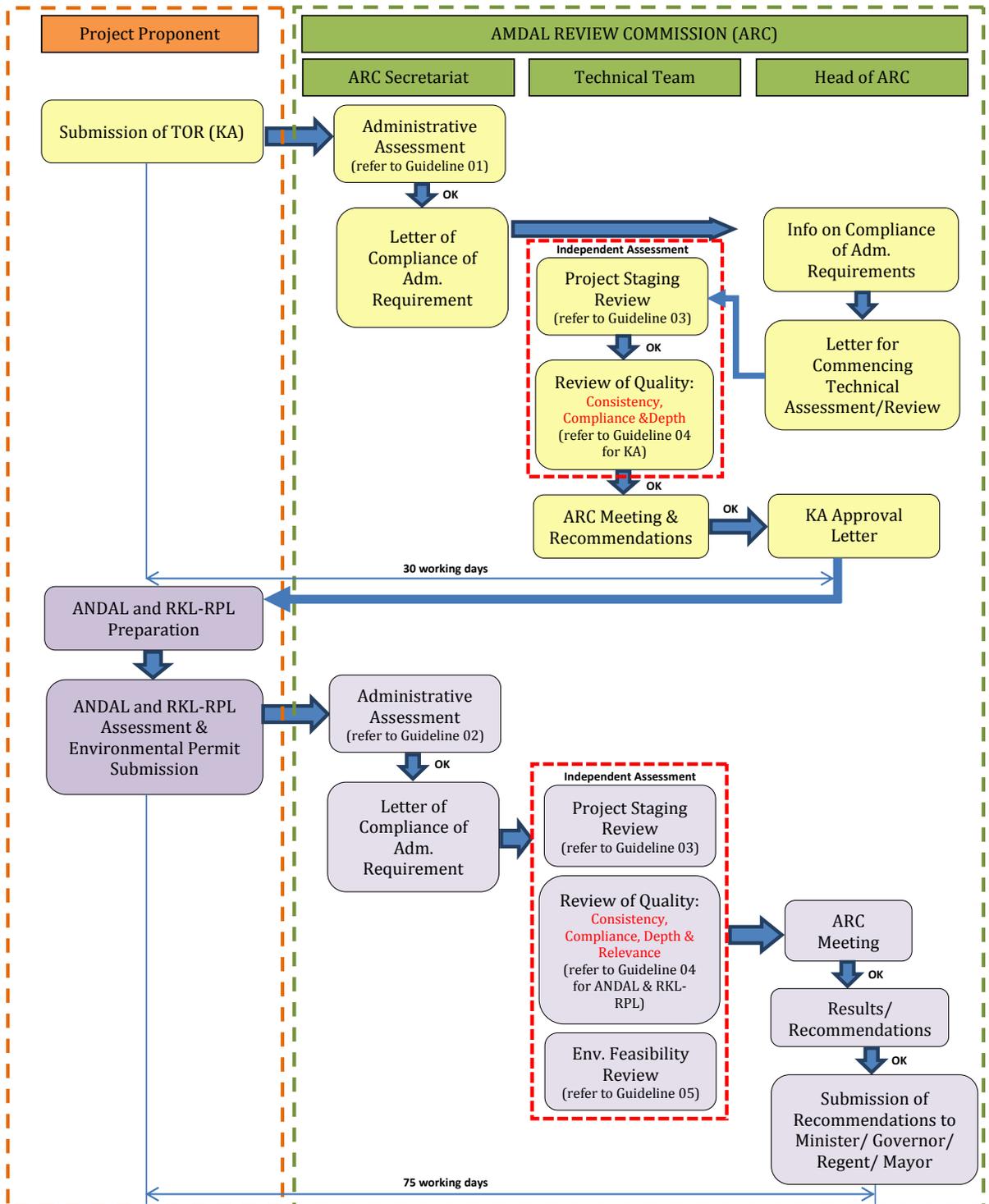


Figure 5-6: AMDAL Document Review by ARC

611. In the case that all administrative requirements are not complied, then the application documents shall be returned to the Project Proponent to be completed. In the case that the proposed activity or project location is not confirmed with the spatial planning (RT/RW), then KA documents also cannot be further reviewed. In addition the Project Proponent shall also be aware of the issuance of the Presidential Instruction No. 6/2013 on the indicative map of the

new permit moratorium (PIPIB) or its derivatives. If the proposed activity or project is included in PIPIB, then KA approval application cannot be further proceed.

### 5.7.1 Administration of the AMDAL Process

612. Another criteria used by MOEFOR for evaluating ARCs performance is the fulfillment of AMDAL process administration. Evaluation for administration of AMDAL process is carried out by based on the criteria taken from the flow of process and mechanism, which is started from the time when secretariat receives AMDAL document until issuance of Environmental Permit.

613. MOEFOR gives the weighting score that ranging from 7.5 to 10 points (the highest score) related to the administration that must be fulfilled by all ARCs in the AMDAL process. The highest weighting is imposed on the process of receiving AMDAL document and distributing invitation and document by the secretariat and document assessment by the technical team. The following table presents the weighting score in details.

AMDAL Process Administration	Weighting/Scoring
Evidence of receiving AMDAL document	10
Send invitation for meeting	
Preparation of minutes of meeting	
Examination of revised document	
SOP of AMDAL process and Environmental Permit	7.5
Administration test	
Announcement of activity plan	
Appropriateness of spatial planning	
Decision of KA Approval	
Decision of Environmental Feasibility	
Announcement of Environmental Permit Application and Issuance	
Issuance of Environmental Permit	

614. The evaluation result by MOEFOR related to the fulfillment of requirements of AMDAL process administration at ARCs of thirty three (33) provinces and fifty one (51) regencies/cities in 2013 is as follows:

Table 5-6: Evaluation Result of Provincial and Regency/City ARCs Performance: AMDAL Process Administration

No	AMDAL Process Administration	Provincial ARCs		Regencies/Cities ARCs	
		Evaluation Result	%	Evaluation Result	%
1	Good	24	73	17	33

No	AMDAL Process Administration	Provincial ARCs		Regencies/Cities ARCs	
		Evaluation Result	%	Evaluation Result	%
2	Fair	6	18	14	28
3	Poor	2	6	17	33
4	No AMDAL Process	1	3	3	6
Total		33	100	51	100

Source: MOEFOR, Asdep for AMDAL, 2013

615. Based on the result of evaluation by MOEFOR, many provincial and regency/city ARCs still could not fulfill the AMDAL administration process in terms of sending invitation and document to ARC members at a minimum of ten (10) working days as stipulated in the MOER No.8/2013. However, within the unfulfillment of administration criteria, MOEFOR put consideration more to the following points:

- The decision for KA approval has been made prior to finalization of KA document;
- Acceptance of ANDAL and RKL-RPL documents prior to the decision of KA approval;
- No formal evidence on the spatial planning conformity;
- No environmental permit issuance.

616. MOEFOR noted the following issues through the implementation of training and performance evaluation for regional ARCs conducted in 2013 in Sumatera region.

- AMDAL document review is carried out by some ARCs with their expired license;
- Decision of environmental feasibility has been made without KA approval;
- Acceptance of ANDAL and RKL-RPL documents prior to the issuance of KA approval;
- No formal evidence on the spatial planning conformity; and
- ARC states that decree of the environmental feasibility is valid for five (5) years, yet in fact, there is no expiry period for environmental feasibility.

### 5.7.2. AMDAL Documents Quality

617. AMDAL document technical review shall be done after the administrative assessment have been done. Technical review of the AMDAL Document shall be done by using the similar scheme, i.e. an independent review by the technical team and formal meeting of the ARC.

618. AMDAL Document review shall be done through three types of review:

- Review of the project staging to ensure the activities are plan during the FS and DED phases. The guideline is specified in the above regulation, i.e. in Guideline No. 03;
- Quality Review, covers the review on the consistency, compliance, depth and relevance of the documents. The guideline is specified in the above regulation, i.e. in Guideline No. 04; and
- Review on the environmental feasibility of the activity or project or business plan shall be done by considering the feasibility criteria, i.e. in Guideline No. 05.

619. The review on consistency covers :

- Consistency between the results of scoping especially on the hypothetical significant impact (including its parameters to be tested) with study method;
- Consistency between hypothetical significant impact (including its parameters to be assessed) with impact estimation method, initial environmental condition, impact magnitude, significant impact characteristics, holistic evaluation and RKL-RPL; and
- Environmental impact consistency (including its parameter) which will be managed as stated on KA (TOR) and ANDAL with what have been stated in RKL-RPL.

620. The review on compliance covers :

- Scoping process with the result of hypothetical significant impact (DPH), boundary of the study area and time limit for study equipped with study method;
- Significant impact, impact estimation and significant impact characteristic;
- Holistic evaluation including determination of environmental feasibility; and
- Impact which is managed and monitored in RKL-RPL.

621. The review on depth:

- The review in depth is made to assess whether the AMDAL documents is prepared by using the valid data and updated methodology according to scientific principles in its implementation and formulation of the results of AMDAL study;
- The assessment of the depth of AMDAL document analysis shall be done by related field expert;
- The guideline is specified in the above regulation, i.e. in Guideline No. 05.

622. The review on relevancy:

- Conformity between environmental management effort with the occurred impact;
  - Conformity between environmental monitoring & management efforts with the occurred environmental impact;
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- Conformity between the type of environmental monitoring & management with the impact that occurred;
- Conformity between the location of environmental management with the impact occurrence;
- Conformity between environmental management period with the timing of impact occurrence; and
- Appropriateness of institution who conduct monitoring and the institution who receive a report with the managed and monitored environmental impacts.

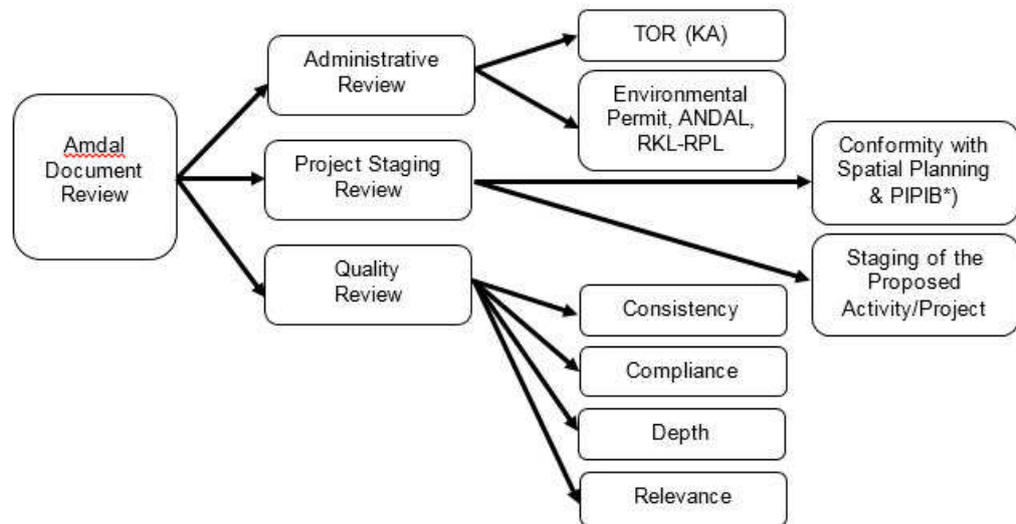


Figure 5-7: AMDAL Document Review

Note: \*) PIPB/Peta Indikatif Penundaan Pemberian Izin Baru (Indicative Moratorium Map)

623. Attachments of the MOER No. 8/2013 contained the detailed guidelines or procedures including forms and guidance to fill the forms to review the AMDAL Document. Therefore, it is clear that basically MOEFOR have prepared the guidelines to improve the quality of AMDAL documents and to make the standard review for the ARCs. In addition, the quality of AMDAL documents shall depend on the following criteria:

- Competency of the members of the ARC, especially the technical competency of the member of Technical Team;
- Integrity of the ARC members;
- Accountability in the review process.

624. The competency of ARC in reviewing AMDAL Documents, especially related to the quality of each member. Key issues to consider during AMDAL review that should be noticed as well by the ARC members are as follows:

- Sufficiency of information provided such as compliance with TOR, standards, guidelines, and legal provisions; comprehensiveness of information and data quality;
- Sufficient attention to AMDAL process such as scoping intensity, quality of public processes, adequacy of information dissemination systems, conflict avoidance considerations, and close working relationships between the AMDAL team and the proponent;
- Reliability of analysis or interpretation such as consideration of cumulative effects, appraisal of residual impacts, consistency with state of scientific knowledge, and use of accepted methodologies;
- Utility for decision-making such as clear description of environmental consequences and their significance, clear statement of monitoring and management options, and clear presentation of issues and recommendations.

625. Selection of ARC members shall be easier in the big cities of Indonesia due to the availability of the required expertise especially those are located in Java Islands, compared to the hinterland or remote areas in Kalimantan Island and in the eastern part of Indonesia. Therefore, supervision and monitoring of the quality of the ARC in the provincial or districts especially in those hinterland or remote areas are essential.

626. Basically, supervision and monitoring of the ARC have been accommodated in MOER No. 25/2009 on Guidelines for Supervision and Monitoring of AMDAL Regional ARC before the issuance of Government Regulation No. 27/2012. Article 64 of Government Regulations No. 27/2012 stipulated that at least the supervision shall be done through the training and provision of technical guidelines, norms, standards, procedures and/or criteria which have been accumulated by the issuance of MOER No. 8/2013

627. In 2013, MOEFOR evaluates one hundred and six (106) AMDAL documents that have been evaluated by the regional ARCs based on three (3) assessment criteria, i.e. consistency, depth and relevancy. Forty (40) documents were evaluated by MOEFOR itself and sixty six (66) documents were jointly evaluated by MOEFOR with the provincial government during the implementation of training and performance evaluation for regional ARCs (as an effort to coach the technical team of ARC in evaluating the AMDAL document).

628. The results of evaluation based on the three criteria is shown below:

Table 5-7: Result of Evaluation Based on the Three Criteria

Achievement of 106 AMDAL documents	Percentage (%)	
	Good	Bad
Consistency	43.4	56.6
Depth	7.5	92.5
Relevancy	19.8	80.2
Quality of document	9 documents (8.5 %)	97 documents (91.5%)

Source: MOE, Asdep for AMDAL, 2013

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629. In line with issuing of ARCs license that has been started in 2010, MOEFOR has conducted evaluation for ARCs performance in examining AMDAL documents. The results are the examined AMDAL documents with good quality is three percent (3%) in 2011, increased to seven percent (7%) in 2012 and nine percent (9%) in 2013.

630. The improvement of AMDAL document quality is very small, which indicates that the understanding of the ARC for AMDAL document quality review is still inadequate.

631. The poor quality of AMDAL document is also acknowledged by some of the AMDAL Review Commissions at (i). BPLHD West Java Province; (ii). BLH Bogor Regency; (iii). BPLHD Jakarta Province; (iv). BLH Banten Province; and (v). BLHD South Tangerang City. Same opinion also admitted by project proponent/implementing agency, like: (i) BPJT; (ii) Sub-Directorate of Road Safety and Environmental Engineering (*Teknik Lingkungan dan Keselamatan Jalan/TLKJ*) of Directorate General of Bina Marga (Ministry of Public Works).

632. Based on discussion with stakeholders and input from ADB workshop, there are some factors responsible for the low AMDAL quality, especially that related to the ARC quality as following:

- Quality of AMDAL documents is reflected by the quality of the ARC Technical Team in reviewing the content. Composition of the Technical Team consists of mostly experts from various Government Technical Institutions (SKPD) related to the proposed activity, whom their participation in the ARC Technical Meeting shall be depended on the assigned staff to attend the meeting. On the other side, there are many technical team members from regional BLH who still do not have AMDAL basic knowledge. Mostly them assess the document focusing on their expertise and do not comment in view of consistency and depth tests. They do not follow the guidelines for preparation of environmental documents set forth in the MOED No. 16/2012;
- MOER No. 8/2013 mentions that verification toward assessed document AMDAL shall be done after document has been revised; however, in fact this verification has not been conducted by ARC. On the other side, there is no sanction for the violation. There is also check list in the mentioned MOER to guide ARC in assessing AMDAL document; even in fact, some of them do not use the checklist;
- There is main issue that many independent experts in ARC also act as AMDAL compiler. This is violation of ethics code;
- Not all ARCs at the regional level have experts of certain expertise who can predict, mitigate or reduce impacts that may be occurred by project activities. The establishment of pool expert is to set up networking among the expert. By this networking, verification of expert can do to obtain information about their integrity of expertise as well as their commitment to responsible on the quality of AMDAL document;
- Rotation of the staffs of Government Technical Institution in ARC. Although manual and guidelines to review AMDAL documents have been stipulated in MOER No. 8/2013, the knowledge of the Government staff on the depth and quality of AMDAL documents still difficult to be maintained, especially in the remote areas.

- Capability of SKPD for reviewing AMDAL document is weak, especially for impact scoping. The BPLHD of West Java Province and BLHD South Tangerang City have strengthened their ARC capacity by involving SKPDs into AMDAL training;
- The role of Head of BLH/BLHD as well as Head of ARC is still less independent and sometimes their decision is influenced by the head of local government;
- Chairman of AMDAL assessment is less assertive in limiting assessor comments that inappropriate with AMDAL sector being discussed;
- Many ARC secretariat team members who have not obtained a certificate of AMDAL basic training yet. Information obtained from ADB workshop based on a survey of BLH offices in entire of Indonesia, the secretariat members who have the certificate is less than ten percent (10%);
- MOER No. 15/2010 regulates the requirements and procedures to obtain the license for ARCs, however; there is no sanctions for them if there is violation occurred;
- Technical team has not performed their task best in assessing quality of AMDAL document. They still based on administrative requirement not substantive requirement.

## **5.8 ADB Consultant Findingstoward the Performance of Regional ARC**

### **5.8.1 AMDAL Review Commission**

633. ADB consultant team recognized the following several issues when joining AMDAL assessment meeting at some regional BLHs:

- AMDAL assessment meeting to discuss on KA was held without complete technical team members. The presence of the project proponent, consultant and all ARC members in the AMDAL assessment meeting is, in fact, ultimately. They should be aware of and understand their roles as well as any legal requirements concerning their works. The roles of the technical team are representing DPH, the project proponent as the decision taker, and the consultant as AMDAL document compiler;
- Project proponent has started field work, meanwhile KA-ANDAL is still under discussion;
- Head of the technical team, which also acted as ARC secretary, cannot lead SKPD to give relevant comments toward discussing AMDAL topics.

634. ADB consultant team has indicated the following technical weak points of representative person from SKPD as members of technical team.

- Insufficient understanding of his /her sectoral regulations, policies and AMDAL that may influence the assessment and study findings toward the project plan;
  - Insufficient existing data and information related to site in which the AMDAL study is performed;
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- Lack of capability on scientific analysis (professional judgment) for proposed environmental impact mitigation.

### **5.8.2 Review Result of the AMDAL Documents**

635. In general, ADB team recognizes the following points when reviewing the KA and ANDAL documents that have been assessed by the ARC:

- Evaluation is emphasized more on administration matters and forms to be filled;
- Details of plans for significant activities in accordance with impact are still less;
- Legend on the map for spatial plan is unreadable;
- Many aspects of significant impact evaluation that described irrelevantly and clearly;
- The environmental baseline data is insufficient in supporting DPH, and often the baseline data is not up to date;
- Inconsistency between the Hypothetical Significant Impact (DPH) and potential impact and methodology;
- Determination of total samples is not referred to the scientific sampling method;
- Relevance among the collected data, collection method, data analysis and data synthesizing with the analyzed impact is hard to be traced so that the relevance is difficult to get.
- Miss-determination of ecology boundary.
- Often found "copy and paste" of ANDAL document.

636. The assessment result of AMDAL Commission regarding the content of RKL-RPL document is too general and less specific on the environmental management and monitoring, management period, timing and frequency of monitoring and monitoring location.

637. In relation to environmental health, AMDAL document often discusses public health and safety of people dwelling on the project plan site, but rarely addresses the health and safety of project workers who come from outside. Dispatching of those workers enhances social interaction between the residents and the site employees, which is a potential avenue for transmission of HIV/AIDS and other social infections. For other sectors of expertise, the information in AMDAL document is provided adequately

### **5.8.3 Review and Analysis by ADB Consultant Related to The Fulfillment of Technical Team Requirements of The Provincial/Regency/City ARCs**

638. The effectiveness of an AMDAL review is strongly influenced by the relevant parties in the review process, results discussion and determination of the status of AMDAL review result. Improving the quality and integrity of the parties especially technical team will greatly affect the quality and effectiveness of the AMDAL document, as one of the obligatory instruments for the environmental management in Indonesia.

639. AMDAL quality control initially relies on the technical team, who provide technical support to the ARC at the stage of KA and draft report preparation. A technical team that consists of members who are committed and competent, normally expected to produce better result in overall, which is starting with a clear scoping of key issues, analysis of the impact and definition of appropriate environmental mitigation with higher quality

640. Almost all BLHDs can fulfill the requirements to obtain ARC license, however, not all licensed ARCs have competent technical team that really understands the AMDAL review procedures as well as DPH that arising from the activities planned by the proponent.

641. Selection of members of the technical team, which starts from the team of secretariat to experts from institutions and the independents who understand the AMDAL and DPH, is very important.

642. The following is the results of study and analysis carried out by consultant related to compliance of technical team requirements of provincial/regency/city BLHD by based on data and discussion with the staffs of environmental document assessment sub-division in the MOEFOR.

- Regional ARC can fulfill the requirements for technical team with human resources at least two (2) people who have passed AMDAL compilation training and at least three (3) people who have participated in AMDAL assessment training. However, based on the MOEFOR evaluation related to AMDAL documents quality test for the evaluated document by some regional ARCs, there are still many AMDAL documents with poor quality. This indicates that their understanding in reviewing the AMDAL documents to produce good quality documents is still less. Having a certificate or been participated in AMDAL training could not ensure the quality of ARC. The certification institution shall develop a good communication with ARC on how to monitor work quality of the certified AMDAL assessors;
  - MOEFOR has not evaluated yet the ability of experts in their expertise, their understanding of AMDAL assessment procedures, DPH that relevant to the discussed cases, as well as guideline 01 to 05 as a tool in reviewing AMDAL documents. MOEFOR needs to improve acknowledgement of ARC technical team members through training activities;
  - Standard or criteria for recruiting technical team members especially independent experts is not available yet. Such criteria need to be set up for the quality standardization of independent experts;
  - The presence of an independent expert in AMDAL review meeting, according to DPH, has less noticed. The meeting keeps running even though the expert is unable to attend. Moreover, for unattended experts shall submit their written comments to the ARC Secretariat;
  - Expertise for certain sectors such as geothermal, nuclear, etc. in implementing and reviewing environmental impact studies are often not available;
  - Mechanism of verification for the comments, suggestions and recommendations from technical team members has not clear. Sometimes the technical team as well as ARC has not acknowledged clearly whether the proponent or AMDAL consultant has revised the
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document in accordance with the meeting results. The work is often taken over by the secretariat team members.

## 5.9 Best Practices from Other Countries

### 5.9.1 India

643. India defines the projects into the categories of A ("Category A") for all projects and activities that require EIA study and clearance from Central Government (Ministry of Environment and Forests) and B ("Category B") for projects and activities that require the clearance from State Government. The application reviewed by the State Level Expert Appraisal Committee/SEAC into two (2) categories, such as B1 to all that will require EIA study and B2 to all that will not require EIA study.

644. In India, the final EIA report that has been prepared by the Proponent, shall be submitted by the applicant to the concerned regulatory authority for appraisal for grant of environmental clearance. The applicant may alternatively submit a supplementary report to draft EIA and EMP addressing all the concerns expressed during the public consultation. Appraisal means the detailed security by the Expert Appraisal Committee/EAC or State Level Expert Appraisal Committee of the application and other documents like the Final EIA report, outcome of the public consultations including public hearing proceedings, submitted by the applicant to the regulatory authority concerned for grant of environmental clearance.

645. The appraisal shall be made by the EAC or SEAC concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative. In conclusion of this proceeding, the EAC or SEAC concerned shall make categorical recommendations to the regulatory authority concerned either for grant of prior environmental clearance on stipulated terms and conditions, or rejection of the application for prior environmental clearance, together with reasons.

646. The appraisal of all projects or activities which are not required to undergo public consultation, or submit an Environmental Impact Assessment report, shall be carried out on the basis of the prescribed application Forms (check lists), any other relevant validated information available and the site visit wherever the same is considered as necessary by the EAC or SEAC concerned.

647. The appraisal of an application shall be completed by the EAC or SEAC concerned within sixty days of the receipt of the final Environmental Impact Assessment report and other documents or the receipt of Forms, where public consultation is not necessary and the recommendations of the EAC or SEAC shall be placed before the competent authority for a final decision within the next fifteen days.

648. The Expert Appraisal Committee (EAC) and the State Level Expert Appraisal Committee (SEAC) shall consist of only professionals and experts fulfilling the following eligibility criteria:

- **Professional:** the person should have (i). at least five (5) years of formal university training in the concerned discipline leading to a MA/MSc degree; or (ii). in case of Engineering/Technology/Architecture disciplines with four (4) years formal training in a professional training course together with prescribed practical training in the field leading to a B.Tech/B.E./B.Arch.

Degree; or (iii). Other professional degree (e.g.: Law) involving a total of five (5) years of formal university training and prescribed practical training; or (iv). Prescribed apprenticeship/article ship and pass examinations conducted by the concerned professional association (e.g. Chartered Accountancy); or (v). a University degree with two (2) years of formal training in a University or Service Academy (e.g.: MBA/IAS/IFS). In selecting the individual professionals, experience gained by them in their respective fields will be taken note of;

- **Expert:** A professional fulfilling the above eligibility criteria with at least fifteen (15) years of relevant experience in the field or with an advanced degree (e.g.: Ph.D.) in a concerned field and at least ten (10) years of relevant experience;
- **Age:** Below seventy (70) years. However, in the event of the non-availability of/paucity of experts in a given field, the maximum age of a member of the EAC may be allowed up to seventy five (75) years.

649. The members of EAC shall be the experts with the requisite expertise and experience in the the following field/disciplines. In the event that persons fulfilling the criteria of "Experts" are not available, professionals in the same field with sufficient experience may be considered.

- **Environment Quality Expert:** experts in measurement/monitoring, analysis and interpretation of data in relation to environmental quality;
- **Sectoral Experts in Project Management:** experts in project management or management of process/operations/facilities in the relevant sectors;
- **Environmental Impact Assessment Process Expert:** experts in conducting and carrying out EIAs and preparation of EMPs and other management plans and who have wide expertise and knowledge of predictive techniques and tools used in the EIA process;
- **Risk Assessment Experts;**
- **Life Science Experts in Floral and Faunal Management;**
- **Forestry and Wildlife Experts;**
- **Environmental Economics Expert** with experience in project appraisal.

650. The membership of the EAC shall not exceed fifteen (15) regular members. However, the Chairperson may co-opt an expert as a member in a relevant field for a particular meeting of the Committee.

651. The Chairperson shall be an outstanding and experienced environmental policy expert or expert in management or public administration with wide experience in the relevant development sector. He/she shall nominate one of the members as the Vice Chairperson who shall preside over the EAC in the absence of the Chairman/Chairperson.

652. A representative of the Ministry of Environment and Forests shall assist the Committee as its secretary. The maximum tenure of a member, including the Chairperson, shall be for two (2) terms of three (3) years each.

653. A State Level Environmental Impact Assessment Authority (SEIAA) shall be constituted by the Central Government, comprising of three (3) members including a Chairman and a member Secretary to be nominated by the State Government or the Union territory Administration concerned. The member Secretary shall be a serving officer of the concerned State Government

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or Union territory administration familiar with environmental laws. The other two (2) members shall be either a professional or expert fulfilling the eligibility criteria as specified above. The specified members who is an expert in the EIA process shall be Chairman of the SEIAA. The State Government or Union territory Administration shall forward the names of the members and the Chairman to the Central Government and Central Government shall constitute the SEIAA as an authority for the purposes of this notification within thirty (30) days of the date of receipt of the names. The non-official members and the Chairman shall have a fixed term of three (3) years (from the date of the publication of the notification by the Central Government constituting the authority). The SEIAA shall base its decision on the recommendations of a State or Union territory level Expert Appraisal Committee (SEAC). In the absence of a duly constituted SEIAA or SEAC, a category "B" project shall be treated as a category "A" project.

654. The authorised members of the EAC and SEAC concerned, may inspect any site(s) connected with the project or activity in respect of which the prior environmental clearance is sought, for the purpose of the screening or scoping or appraisal, with prior notice of at least seven days to the applicant, who shall provide necessary facilities for the inspection. EAC and SEACs shall meet least once every month.

655. The Final EIA report and other documents (copy of the video tape CD of the public hearing proceedings, copy of final layout plan and copy of the project feasibility report) submitted by the applicant, shall be scrutinized in office within 30 days from the date of its receipt.

656. Every application shall be placed before the EAC/SEAC and its appraisal completed within sixty (60) days of its receipt with requisite documents/details. The applicant shall be informed at least fifteen (15) days prior to the scheduled date of EAC/SEAC meeting for considering the project proposal.

657. The minutes of the AEC/SEAC meeting shall be finalised within five (5) working days of the meeting and displayed on the website of the concerned regulatory authority. In case the project or activity is recommended for grant of Environmental Clearance (EC), then the minutes shall clearly list out the specific environmental safeguards and conditions. In case the recommendations are for rejection, the reasons for the same shall also be explicitly stated.

658. The regulatory authority shall consider the recommendations of the EAC/SEAC concerned and convey its decision to the applicant within forty five (45) days of the receipt of the recommendations of the EAC/SEAC or in other words within one hundred and five (105) days of the receipt of the final EIA report, and where the EIA is not required, within one hundred and five (105) days of the receipt of the completed application with requisite documents.

659. The regulatory authority shall normally accept the recommendations of the EAC/SEAC. In cases where it disagrees with the recommendations of the EAC/SEAC, the regulatory authority shall request reconsideration by the concerned EAC/SEAC by stating the reasons for the disagreement within forty five (45) days of the receipt of the recommendations from EAC/SEAC. An intimation of this decision shall be simultaneously conveyed to the applicant. The EAC/SEAC in turn, shall consider the observations of the regulatory authority and furnish its views on the same within a further period of sixty (60) days. The decision of the regulatory authority after considering the views of the EAC/SEAC concerned shall be final and conveyed to the applicant by the regulatory authority within the next thirty (30) days.

660. The decision of the regulatory authority and the final recommendations of the EAC/SEAC shall become the public documents.

661. Deliberate concealment and/or submission of false or misleading information or data which is material to screening or scoping or appraisal or decision on the application shall make the application liable for rejection and cancellation of prior environmental clearance granted on that basis. Rejection of an application or cancellation of a prior environmental clearance that already granted on the ground, shall be decided by the regulatory authority, after giving a personal hearing to the applicant and following the principles of natural justice.

### **5.9.2 Malaysia**

662. The EIA procedure adopted in Malaysia consists of three (3) major steps, namely preliminary assessment, detailed assessment and EIA review.

663. Preliminary assessment relates to the initial assessment of the potential impacts. For prescribed activities, it has the following objectives:

- to examine and select the best from the project options available;
- to identify and incorporate into the project plan appropriate abatement and mitigating measures; and
- to identify the significant residual environmental impact.

664. Detailed assessment is undertaken for those projects for which significant residual environmental impacts have been predicted in the preliminary assessment, and its objectives include:

- to describe the significant residual environmental impacts predicted from the final project plan;
- to specify mitigating and abatement measures in the final project plan; and
- to identify the environmental costs and benefits of the project to the community.

665. Review of EIA reports is carried out internally by the Department of Environment (DOE) under Ministry of Natural Resources and the Environment for preliminary assessment reports, whilst detailed assessment reports are reviewed by an ad hoc review panel. The objectives of detailed review process are:

- to critically review the Detailed Assessment reports;
- to evaluate development and environmental costs and benefits in the final project plan; and
- to formulate recommendations to the project approving authority relevant to the implementation of the project.

666. However, in practice, most of the preliminary EIA reports are reviewed by an EIA Technical Committee that consisting of selected staff from the EIA Section of the Presentation Division of DOE of Malaysia. The DOE is the federal authority as core agency responsible for the development and management of the EIA system. There is no formal involvement of subject specific experts and other relevant agencies although representatives from various agencies may be called on to review problematic or critical cases of preliminary assessment. No formal mechanism is established for reviewing results for EIA compliance

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monitoring and no regular audit of the EIA system has been carried out. Evaluative control can be rated as of only limited effectiveness.

667. The review of preliminary report is carried out at the Department of Environment state offices. The processing and approval procedure is headed by the State Director and assisted by Environmental Control Officers. The State Director is responsible for approving or rejecting an EIA Report. One Stop Agency meetings with other relevant agencies or departments are held when necessary. Comments and verifications from relevant agencies or departments are sought for certain cases.

668. The review of preliminary reports for activities involving more than one state and other activities that may be decided by the Director of Environment from time to time are carried out at the Department of Environment Headquarters. The processing and approval procedure is headed by the Director of Assessment Division. He is assisted by the Principal Assistant Directors of various EIA Sections and other officers in the Division. The Director of Assessment Division chairs the EIA Technical Committee meetings. The EIA Technical Committee is an in-house committee, set up to examine the preliminary EIA Reports not handled by the states offices. One-Stop Agency meetings with relevant departments or agencies are held when necessary. Comments and verifications from the relevant departments or agencies are acquired when necessary. The committee formulates recommendations to the Director of Assessment Division on the acceptability of the preliminary EIA Report.

669. The review of detailed assessment report is carried out by the Department of Environment Headquarters. Report processing and approval procedure set-up is headed by the Director General of Environmental Quality who is responsible for approving or rejecting the EIA report. He/she is assisted by the Director of Assessment Division who also functions as the Secretary to the Detailed EIA expert Review Panel. The Chairman of this panel is the Director General of Environmental Quality. The Detailed EIA Review Panels main task is to critically review Detailed EIA Reports and formulate recommendations to the relevant project approving authority. The Detailed EIA Review Panel is established on an ad-hoc basis specifically for a particular project. The panel comprises of independent members from relevant disciplines and various organizations such as universities and non-governmental organizations. Detailed EIA Reports are also displayed at all Department of Environment state offices, public libraries and the relevant local authority office for public comments. The public is notified through the mass media and homepage of the Department as to when and where the Detailed EIA Reports are available for review and comment.

670. The appointment of the Review Panels is made by the Director General of Environment and the responsibilities of its members. Appointments of members to the Review Panel are made on a project by project basis. The Secretariat of the Review Panel maintains a list of experts who may be called upon to sit as members of any Review Panel established. The selection of the experts depends on the environmental impacts and issues expected of the project.

671. The functions of the Review Panel are:

- to review and confirm the Terms of Reference for Detailed Assessment;

- to review and evaluate Detailed Assessment reports; and
- to make recommendations on the implementation of the project.

672. The main duties and responsibilities of the Expert Review Panel are to assess the scope of study for specific issues related to the project based on TOR as proposed by the Proponent and to give comments to ensure the comprehensiveness of the TOR, to assess detailed EIA Report and other related reports and to provide assessment and inputs (especially for issues within the respective expertise on the following matters:

673. The Secretariat to the Review Panel is provided by the Assessment Division of the Department of Environment, Ministry of Natural Resources and the Environment. The functions of the Secretariat of the Review Panel are:

- to provide a full-time secretariat to the Review Panel;
- to provide procedural advise to project initiators (or their agent) required to conduct;
- to assist the Review Panel in preparing Detailed Assessment Briefs and Detailed Assessment reviews;
- to maintain a register of experts available to assist the Review Panel and to solicit their contributions;
- to perform such other tasks as maybe given to it from time to time by the Review Panel;
- to review from time to time the Environmental Impact Assessment Handbook
- to recommend any amendments to it;
- to promote and encourage the development of environmental data systems to meet the requirements of environmental impact assessment;
- to promote the development of environmental impact assessment methodologies including the development of specific environmental impact guidelines.

674. A Panel of Experts is appointed when required to provide specialized technical or scientific advice to the Director General on specific aspects of individual projects. Experts either as individuals or representatives of interest groups may be drawn from both the public and the private sectors.

675. Public are also being invited to give comments on the proposed projects which have been subjected to Detailed Assessment, unless it is against the public interest. Public comments shall be given in writing and received by the Secretariat of the Review Panel within forty five (45) days from the first public notification through advertisement in newspaper.

676. Notification of the receipt of a Detailed Assessment report and the places where copies of the reports may be reviewed or obtained will be given in the public notice/announcement. Copies of Detailed Assessment reports subject to public scrutiny are displayed at every office of the Department of Environment, public libraries and the relevant local authority offices.

677. The Review Panel in formulating its recommendations to the project approving authority, will take into account any written comment received from the public. After the review process, the Detailed Assessment report and

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680. Lesson learnt from the EIA review process in Malaysia is the EIA review meeting is carried out for purpose of discussion and coordination that not judging each other in which the stakeholders give mutual support and assistance to obtain a solution. Each attended government representatives have well EIA and its technical understandings, actively provide input and/or information related to the discussed activity plan. It will enrich the conducted EIA studies.

## **5.10 Development of Experts Pools**

### **5.10.1. The Criteria Experts Pools Candidate**

681. The quality of AMDAL document is reflected by the quality of the Technical Team who shall have relevant expertise on the project technical issues. Roles of the independent experts related with the proposed activity as the Technical Team members are important to enhance the quality of AMDAL documents. The quality of AMDAL documents or reports is reflected by the qualification and competency Technical Team of the ARC. Since the composition of the Technical Team consists of mostly experts from various Government technical institutions related to the proposed activity, whom their participation in the ARC Technical Meeting shall be depended on the staffs who is assigned to attend the ARC Technical Team meeting. If the person who is participating the Technical team meeting has the good qualification, then his/her review results on the AMDAL documents shall be good, otherwise, shall affected to the low quality of AMDAL documents. Therefore, the involvement of the qualified independent professional especially the expert of each expertise area who has the practical and technical experiences in the related field, not only knowing the theoretical analysis but also the implementable measures for specific issues, shall enhance the quality of AMDAL Documents. Limitation on the availability of qualified experts to be involved as the members of Technical Team of ARC in some provinces especially in the remote areas has triggered the problems on the government effort to strengthen the quality of ARC through the involvement of the qualified professionals. The concept of using the pool of expert to strengthen the performance of Technical Team of ARCs is essential especially for strengthening the ARC especially in the remote areas.

682. The limitation of experts in particular field causes superficial discussion about the area. At present, almost all regencies/cities BLH are facing the same problem. Based on the discussion with regencies/cities BLH, they have asked assistance to Provincial BLH, local University or provincial University. This problem is mainly occurred in remote regencies/cities BLH such as Kalimantan and Papua.

683. Based on the discussion with stakeholders such as Environmental Study Center, BLHD and other sectors, it is concluded that pool expert system is necessary to be developed.

684. Therefore, the ARC needs to establish a website network that can be accessed by all relevant institutions in Indonesia.

685. The Ministry of Environment is planning to strengthen the capacity of technical team by developing pool expert system. It is expected by developing this system the process of AMDAL document assessment may be improved and done thoroughly, because it involves many qualified experts. Currently, the technical team has the limitation in responding important issues in AMDAL

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document due to lack of experts. One of the sectors that has no expert is geothermal, which still need geologist.

686. The system of expertise is actually easier to be implemented by Environmental Research Centre (*Pusat Studi Lingkungan/PSL*), for example at the levels of Central and Regional Coordinator (*Korwil/Koordinator Wilayah*). The Regional Coordinator covers Sumatera, Java (1 & 2), Kalimantan, Sulawesi, Maluku, Papua, Bali and Nusa Tenggara. Each PSL certainly has adequate quantity of expertise. If not available, they can request from universities or even from the closest PSL members. The only constraint is PSL has no budget. If MOEFOR could allocate funds to BKPSL for the development of Pool of Experts, it would be a good solution. Experts data collection would be much easier, even can be compiled as a national pool of experts.

687. For the pool experts data, it is recommended that the secretariat of ARC keeps it since they are the one who need the information and have the budget as well. They shall have data of pool experts and it will be a part of ARC performance evaluation.

688. In regard with the above matters, there is a directory called Environmental Expert Directory prepared by Environmental Management Center of Regional Java in 2007, which provides information to stakeholders about the existence of environmental experts from universities, especially in the area of Java. It presents list of domain experts that covers name, areas of expertise, institution, address and contact number and may functioned as a tool for searching the required domain experts.

689. To more precisely determine the qualified and prospective candidates that will serve as an expert in the pool expert system to be developed, team shall cooperate closely with the leaders of selected Professional Organizations at national level. The Professional Organizations shall select the recommended professional experts with certain criteria.

690. ADB consultant has proposed the following criteria for screening the expert qualification which further needs to be verified by responsible institution, possibly MOE, for managing and setting experts criteria as well as to maintain the expert networking system:

- a. Academic qualification: minimum bachelor (graduate) degree and/or similar with at least ten (10) years of relevant experience in his/her field of work;
- b. Portfolio of work: prepare portfolio work he/she has involved in the field of expertise that legalized by relevant institution;
- c. Preferably have experiences and knowledge in Environmental Impact Assessment; and
- d. Preferably recommended by his/her professional organizations or commissioned institution.

691. Recruitment of experts possibly done online for its efficiency and effectiveness. People who interested to apply may access it anytime as well as the result of selection.

### 5.10.2 Management of Experts Pool

692. Pool expert system requires a committee or team to manage it. For example, FAO has a Joint Secretariat in calling expert for food additives, GESAMP (Group of Experts on the Scientific Aspects of Marine Environmental Protection) Experts has an Executive Committee to establish and maintain the pool as a database of expertise.

693. The establishment of a Commission Expert to coordinate, define and be involved in the selection of pool of experts is indispensable. In addition, a regulation to mention that all experts for the ARC must be registered in the Commission Expert should also be considered for the standardization of ability and quality of experts.

694. ADB consultant proposes that Commission Expert shall has a legal status and members that consists of representatives from professional organization.

695. ADB consultant proposes to Assistant Deputy of Environmental Impact Study (Asdep 4/l) for the Ministry of Environment to appoint Environmental Studies Center Coordination Body (*Badan Koordinasi Pusat Studi Lingkungan/ BKPSL*) to act as Commission Expert for coordinating and managing the pool experts system with consideration that BKPSL already have members of one hundred and seven (107) PSLs (Environmental Research Centre) under university throughout Indonesia regarding the expert data.

696. BKPSL has Secretariat at PPSML-UI (*Pusat Penelitian Sumberdaya Manusia dan Lingkungan Universitas Indonesia*), five (5) Working Commissions i.e. Information and Communication, Education and Training, Research and Community Empowerment, Environmental Management Strengthening, Organization and Professional Strengthening, and Regional Coordinators for Kalimantan, Bali and Nusa Tenggara, and Sulawesi, Maluku, and Papua.

697. Furthermore, BKPSL will prepare the Commission Expert organization structure for its management and work plan to be carried out may starting from the portfolio evaluation until the final selection of qualified experts.

698. It requires determination for experts recruiting, reserving, and distributing mechanism by BKPSL, including required resources supply or availability issues, as well as determination for classification or categorization of AMDAL experts.

699. Illustration of relationships between the Commission Expert and the pool of experts is shown below.

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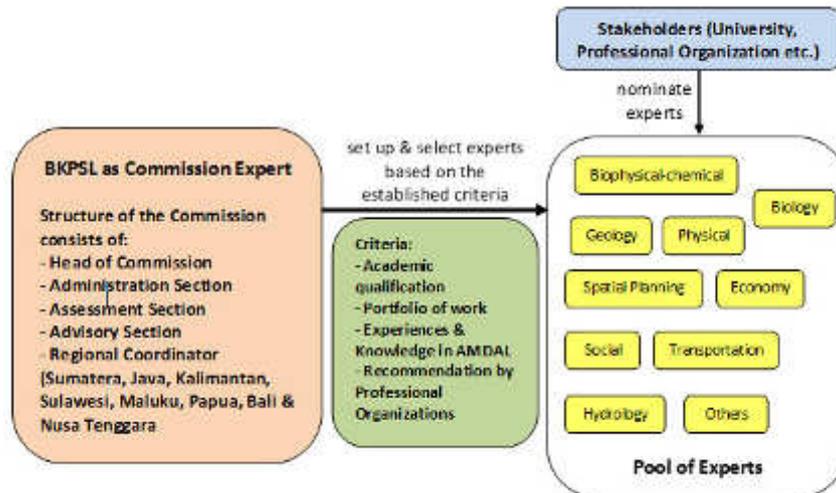


Figure 5-9: Illustration of relationships between the Commission Expert and the Pool of Experts

700. The workflow illustrates that the structure of Commission Expert shall be composed of Head of Commission, sections of administration, assessment, advisory and regional coordinator.

701. The tasks of the Commission Expert shall be:

- a. To screen the nominees' CVs and determine whether an applicant meets all the essential requirements;
- b. To put prospective experts into the Pool of Experts database; and
- c. To keep the pool of experts up-to-date. In particular, it shall regularly check whether the experts listed in the pool are still available for supporting ARCs.

702. Members are appointed for a period of one (1) or two (2) years. Their term of office may be renewed. Representatives who are no longer capable of contributing effectively to the Commission Expert or who resign may be replaced for the remainder of their term of office.

703. Expenses related to the activities of Commission Expert shall be considered as follow:

- a. Members shall not be remunerated for the services they render;
- b. Travel and subsistence expenses incurred by members in the activities of the Commission shall be reimbursed in accordance with the provisions in force within the Commission.

704. The pool of experts is set up and maintained based on an open-ended call for experts by the Commission. In their application, the expert should provide the following information:

- name, contact details and affiliation of the expert;
- the expert's fields of expertise;
- a short description of the expert's experience relevant to the indicated fields of expertise;
- a short CV;

- the types of activities for which the expert will be available.

705. Information on the selected experts will be managed in a data base and published on the web site.

706. The experts work on ad hoc basis and shall comply with the obligations of professional secrecy laid down by the Commission.

707. For the expenses, the experts designated to participate in such AMDAL review meetings will not receive any remuneration, however travel costs, subsistence allowance and other related expenses will be the exclusive responsibility of Commission Expert.

708. The advantages to be gained by experts if they are registered in the Commission Expert should be contemplated, for example:

- Acknowledgment of the experts existence to the public;
- No doubt about the experts ability;
- Encourage careers as experts in their field.

This is proposed to motivate all experts to enroll themselves.

709. Advantages for ARCs among others are:

- Easy for ARC to find experts with specific expertise to complete their technical teammembers;
- There is no doubt on the results of the AMDAL document assessment.

710. Continuity of the Commission Expert needs to be noticed as well. Management cost for daily operation is the essential point and need to be taken into account.

711. Government Regulation No.27/2012 regarding Environmental Permit, Chapter VII Article 69 regulates the funding mechanism related to financing for the activities of 1). Assessment of AMDAL document by ARC, Technical Team and Secretariat of ARC; and 2). examination of UKL-UPL document by Provincial/Regency/City BLH or BLHD. Therefore, revenue for the Commission is expected could be allocated from National Budget (*Anggaran Pendapatan Belanja Negara/APBN*)/Regional Budget (*Anggaran Pendapatan Belanja Daerah/APBD*) for administrative expenses.

### **5.11 Formation of Appropriate Technical Team for ARC Based on Sectors**

712. As mentioned previously, the role of technical team is very important for providing good recommendations on the environmental feasibility or non-feasibility of an activity or project plan to the governor/regent/major. These local authorities will finally issue the environmental feasibility decision and environmental permit concurrently if the plan is decided as environmentally feasible to the project proponent.

713. In this study, ADB Consultant team initiates in forming a technical team that consists of experts based on required expertise for the three (3) sectors, namely geothermal, toll roads and water resources as follows:

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Sector	Expert
<b>Geothermal</b>	Forestry
	Flora
	Fauna
	Social Culture
	Social Economic
	Sociologist
	Environmental Technology
	Environmental Health
	Geologist
	Geotechnical
	Physical-Chemical (Water & Air)
	Radioactive
<b>Road</b>	Hydrologist to predict and evaluate impacts on surface water, drainage, etc.
	Ecologist to predict and evaluate impacts on fauna and flora, etc.
	Sociologist or Anthropologist to predict and evaluate impacts on people, settlements, etc.
	Economist to value environmental goods and services and potential impacts.
	Environmental Health Expert to predict and evaluate impacts on air quality, health and safety, etc.
	Engineer to advice on design, alternatives and mitigation measures.
<b>Water Resources: River Normalization</b>	Hydrologist
	Irrigation/Drainage Engineer
	Agronomist
	Soil Conservation Expert
	Biologist
	Economist
	Sociologist or Anthropologist
	Physical-Chemical (Water & Air)
Environmental Health Expert	

714. From the composition of experts from the three (3) sectors mentioned above, there are differences for the required experts. For example, geologist and geotechnical experts are required for geothermal sector, but not for toll road and water resource sectors.

715. Some secretariat teams have difficulty in inviting appropriate experts to the AMDAL review meeting since they do not have enough knowledge regarding the typical DPHs that will emerge from the activity plan. The output of this study could be a reference for the secretariat team to invite experts in accordance with the discussed AMDAL topic.

716. The secretariat team requires capacity building programs in enhancing their knowledge on typical DPHs of each activity plan by training, workshop, FGD, etc.

717. Common output of Technical Team in ARC meeting is shown in the following figure.

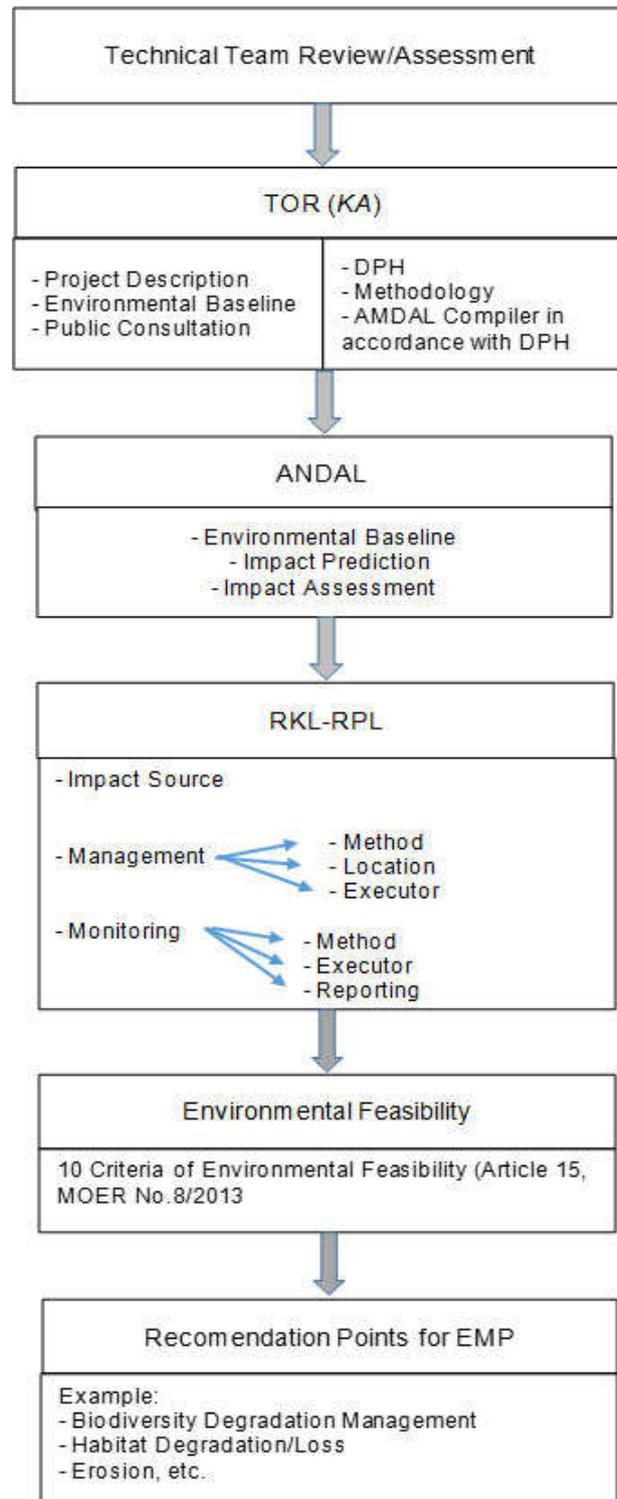


Figure 5-10: Common Output of Technical Team in ARC Meeting

718. ADB Consultant team develops a sample output of DPH and its sources related to two (2) selected sectors, namely geothermal and toll road, as a reference to the technical team in giving recommendations, suggestions and responses when they are assessing the AMDAL document.

additional information will be appended to the Detailed Assessment Report, will be made available in the library of Department of Environment.

678. In performing its duties to the Secretariat of the Review Panel will compile the Detailed Assessment Review Document which are not published and comprise of the following:

- (i) the terms of reference giving the purpose of the Detailed Assessment and the potentially significant residual impacts which require further study clarifications;
- (ii) comments from Review Panel members and the public on environment data collection/requirement;
- (iii) the Environmental Impact Assessment Reports;
- (iv) all additional information in response to the comments;
- (v) minutes of the Review Panel meeting; and
- (vi) decision of the EIA Report.

679. The normal period for the preliminary assessment is five (5) weeks and twelve (12) weeks for Detailed Assessment. The following figure shows the EIA procedures in Malaysia:

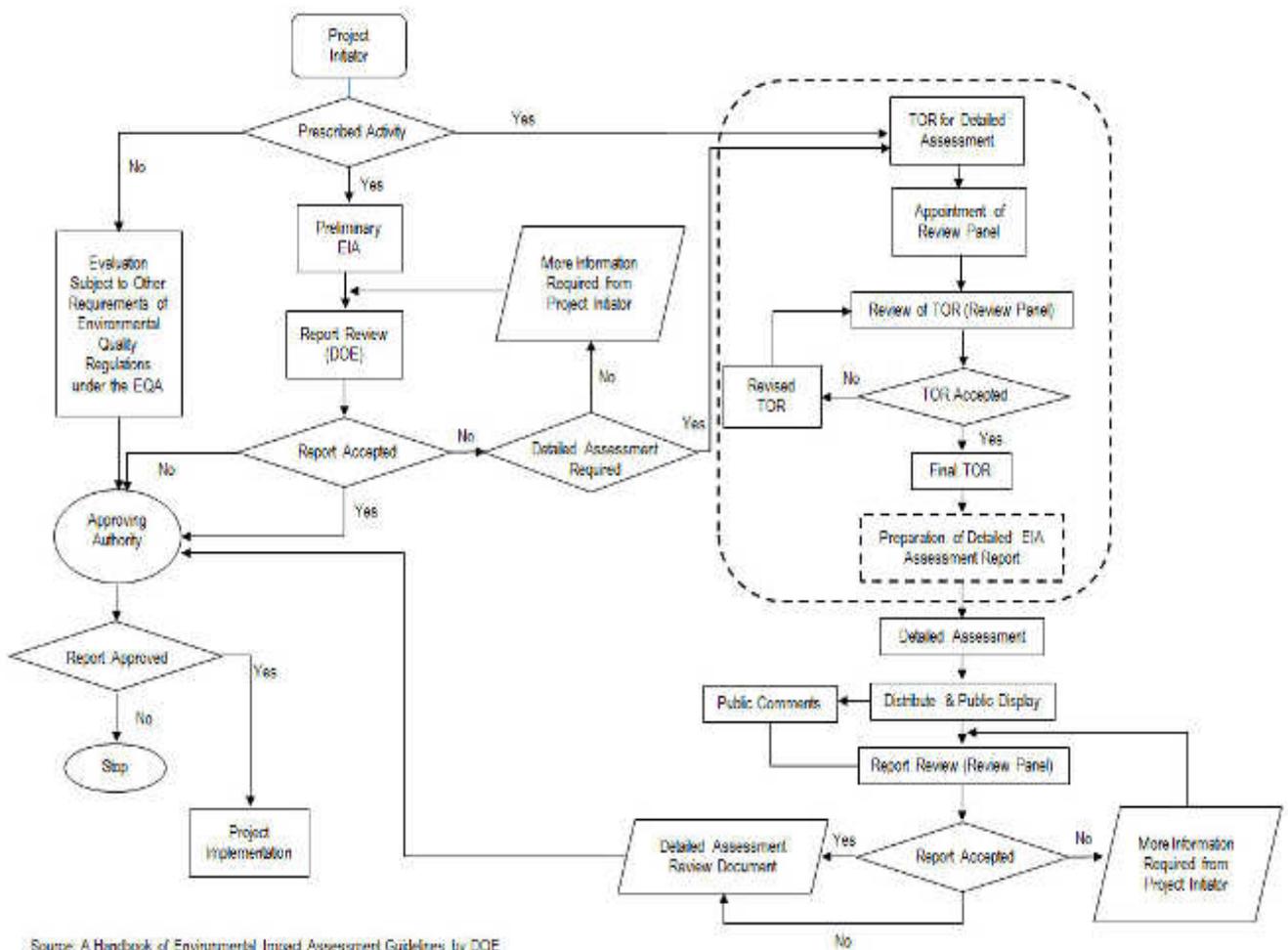


Figure 5-8: Environmental Impact Assessment Procedures in Malaysia

Sector	Specific & Technical Issues to be considered
Geothermal	<p><b>Noise:</b> The potential noise sources are noise arising from geothermal fluid escaping from the drilling of wells, working noise, well testing and vibration. Machinery used to clear site and vehicles used on site would emanate noise which is temporary and limited.</p> <p><b>Dust /Air Quality:</b> From the very nature of the project, there will be emissions released to the atmosphere.</p> <p><b>Public Health and Safety:</b> The major impact on health and occupational safety is related to the work force engaged in construction bringing into site some alien diseases and be affected by diseases prevalent in the site.</p> <p><b>Health/ Safety of Workers:</b> The work force carries out their job with potential hazards (fall of metal on head or foot during drilling and power plant construction and transmission line construction). The safety regulation /safety manual regarding workers' health and safety must be included in the tender document and workers receive specific and routine safety trainings/orientation and shall be issued job specific safety equipment (overalls, raincoat, gloves, helmets, safety shoes, masks and ear mufflers, etc.).</p> <p><b>Substance Abuse</b> Construction labor force comprising primarily of young men living away from their families, with rather stable wages and ideal time, with few recreational pursuits and no domestic responsibilities, can often lead to the overindulgence with alcohol. This can lead to abuse, fighting and injury, particularly if women are involved.</p> <p><b><u>Impacts on Biological Environment</u></b></p> <p><b>Flora:</b> The drilling of the proposed geothermal project will have an impact on biological environment. The main impact will be the clearance of vegetation for foundation pads and ponds, power plant, access road and transmission line.</p> <p><b>Fauna:</b> Most of the vegetation are already heavily degraded and deforested due to expansion of cultivation land which causes habitat loss. As a result, the wild life resources are moved to mountain or hills around the project site.</p> <p><b>Impact on Protected and Reserve Areas</b></p> <p><b>Soil:</b> During foundation pads and ponds excavation, power plant construction, access road construction and transmission line construction soil will be exposed to erosion.</p> <p><b>Air Quality:</b> Dust emissions, gas particles (CO<sub>2</sub>, H<sub>2</sub>S, ammonia and other non-condensable gases) will have short term adverse effect on air quality which escapes from the project activity and vibration, air pollutants released from mobile construction equipment could also have a potential impact affecting the immediate project area.</p> <p><b>Water Quality:</b> Rivers /streams or water wells in the proposed project area, to be affected due to contamination or discharge of sludge.</p> <p><b>Environmental Hazard Management:</b>The only risks or accidents that are expected to happen during the construction are like hit by objects, car accidents, etc.</p> <p><b>Mitigation Measures</b></p>

Sector	Specific & Technical Issues to be considered
	<p>Mitigation is undertaken in order to reduce /minimize the impacts of the project.</p> <ul style="list-style-type: none"> <li>• Drilling wells will use circulating surface water from the existing ponds and water pumped from somewhere;</li> <li>• Preparation of appropriate disposal ponds for excavated sludge, construction waste and debris;</li> <li>• Use of environmental clauses for dirt and dust clouds arising from vehicles transporting equipment and materials;</li> <li>• Use of environmental clauses for noise emitted from the drilling of wells;</li> <li>• At completion of construction work, areas not needed anymore and sensitive areas should be replanted / reforested;</li> <li>• Hazardous materials should be handled properly and placed far away from water bodies, humans and animals;</li> <li>• The impacts on housing and farmlands will be mitigated significantly by the implementation of Resettlement Policy Framework (RPF);</li> <li>• Measures against the spread of HIV/AIDS and STI would be through implementation of efficient strategy concentrating on awareness and information campaigns on the work force (without neglecting the host communities).</li> </ul> <p><b>Monitoring Program</b></p> <p>Environmental and social monitoring is an essential component of project implementation. It facilitates and ensures the follow-up of the implementation of the proposed mitigation measures. It helps to anticipate possible environmental hazards and/or detect unpredicted/unforeseen impacts over time.</p> <p><b>Public Consultation and Public Disclosure</b></p> <p>Public consultation with the affected community members, elders and chairperson of the area.</p>
<b>Toll Road</b>	<p><b>Destruction of Physical Environment</b></p> <ol style="list-style-type: none"> <li>a. Soil compaction and erosion;</li> <li>b. Redirecting stormwater to new areas;</li> <li>c. Obstruction of natural water channels.</li> <li>d. Abandoned disused quarries;</li> <li>e. Contamination with melted bitumen.</li> </ol> <p><b>Increased Water Demand or Supply and Water Quality</b></p> <ol style="list-style-type: none"> <li>a. Increased abstraction of water for construction;</li> <li>b. Contamination of water bodies through car washing, disposal of solid waste, discharge of effluent, bitumen, oil leaks, etc;</li> <li>c. Reduced amount of downstream river flow;</li> <li>d. Decreased water quality and increased incidences of waterborne diseases.</li> </ol> <p><b>Destruction of Flora and Fauna</b></p> <ol style="list-style-type: none"> <li>a. Loss of unnecessary vegetation cover to avoided;</li> </ol>

Sector	Specific & Technical Issues to be considered
	<p>b. Destruction of indigenous tree species in the area;</p> <p>c. Perturbation of terrestrial and/or aquatic environments.</p> <p><b>Inappropriate Drainage</b></p> <p>a. Increased erosion and siltation of water bodies;</p> <p>b. Flooding of settlement area and farms;</p> <p>c. Lack of access to poorly drained areas by the communities.</p> <p><b>Oil Spills and contamination</b></p> <p>a. Destructive of productive land;</p> <p>b. Water contamination bodies;</p> <p>c. Destruction of ecosystems.</p> <p><b>Air and Noise pollution</b></p> <p>a. Degradation of air quality and ambient noise due to excavations operations;</p> <p>b. Degradation of air quality by vehicles emissions, bitumen burning and dust during excavation operations;</p> <p>c. Interference with domestic affairs due to excessive and destructive noise.</p> <p><b>Encroachment, Displacement and Resettlement of Affected People</b></p> <p>a. Loss of property and unwanted eventualities like death or fights, etc;</p> <p>b. Destruction of existing road hence reducing its life span by heavy earth moving equipment;</p> <p>c. Relocation of market and businesses along the road reserve.</p> <p><b>Occupational Health and Safety</b></p> <p>a. Increased incidence of injuries, road accidents and occupational health hazards to workers and public at large;</p> <p>b. Increased incidences of STI, HIV/AIDS, school drop outs, unwanted pregnancies, alcoholism, communicable diseases among other;</p> <p>c. Interference with local culture and values;</p> <p>d. Increased informal settlement;</p> <p>e. Increased incidences of water and soil contamination;</p> <p>f. Decreased level of sanitation;</p> <p>g. Incidences of suffocation and poisoning.</p> <p><b>Social Impacts</b></p> <p>a. Resources competition;</p> <p>b. Loss of cultural heritage;</p> <p>c. Gender equity;</p> <p>d. Alcoholism and drug abuse;</p> <p>e. Interference with existing local infrastructure such as access roads;</p> <p>f. Insecurity.</p>

### 5.12 Cost for AMDAL Review Activity

719. There is no official tariff for AMDAL review meeting cost in Indonesia. Based on AMDAL consultants' experiences, sometimes they have to spend a lot of money for getting environmental permit. Therefore, it is very important to decide the amount of review meeting cost as a standard cost/tariff that could be applied for all regions in Indonesia. The price/tariff will vary depends on the region.

720. Government Regulation No.27/2012 regarding Environmental Permit Chapter VII Article 69 regulates the funding mechanism related to financing for the activities of 1). Assessment of AMDAL document by ARC, Technical Team and Secretariat of ARC; and 2) examination of UKL-UPL document by Provincial/Regency/City BLH or BLHD. Unfortunately, there is no clear cost that needs to be paid by the project proponent until the issuance of environmental feasibility decision and environmental permit (for AMDAL) and recommendation of approval of UKL-UPL and environmental permit (for UKL-UPL).

721. Based on survey, ADB consultant team obtained data related to the percentage of expenditures for AMDAL study for the hydropower project, which is carried out in 6 (six) months as shown in table below for reference. The cost allocation for AMDAL document review is thirty five percent (35%) of the total cost of the AMDAL study. However, the percentage is not a standard tariff for AMDAL document review and UKL-UPL document examination decided by the central or local governments.

Table 5-8: Example of Expenditures Percentage of AMDAL Study for Hydropower Project

No.	Description	Percentage of Expenditure (%)
1	Experts and Supporting Staffs Remuneration	20
2	Field Survey & Socialization Cost	20
3	Laboratory Analysis Cost	15
4	Secondary Data Collection Cost	10
5	AMDAL Document Review & Reporting Cost	35
Total		100

Source: Report of AMDAL Study for Kusan Hydropower Project (65 MW) and SUTT 150 kV Kusan Simpang Empat Pengaron, 2009

### 5.13 Recommendations for Strengthening ARCs

722. Strengthening ARC through the establishment of independent consultant as ARC may also be considered. Indonesia may refer from other countries, such as the Netherlands. An independent commission called the Netherlands Commission for Environmental Assessment (NCEA) that provides a review of each impact assessment was established by decree in 1987. The NCEA advises governments on the quality of environmental information in EIA and does not get involved in decision-making or political considerations.

723. Therefore, the Independent Consultant as an independent expert body for environmental impact assessment and of a legal status to act as ARC is urgently required.

724. The consultant must be independent and transparent. All decisions taken are unaffected by any administrative responsibilities or political considerations, and they act totally independent from the Government.

725. The independent consultant operates under an agreement with the Ministry of Environment and can also work under agreement with donors/lenders.

726. The following is the recommendations summarized by an ADB consultant for strengthening ARC capacity.

Table 5-9: Recommendation for Strengthening ARC Capacity

<b>Problems Finding</b>	<b>Secretariat AMDAL Review Commissions</b>
	<p>1. Members of ARC secretariat have insufficient AMDAL basics knowledge, especially in the BLH/BLHD;</p> <p>2. The ARC secretariat team has less optimal in carried out the administration process according to MOER No.8/2013;</p> <p>3. ARC secretariat has less concerning with the relevant invitees for the AMDAL review meeting. For instance, Environmental Health Expert mainly for Health Risk Analysis has often not invited to the AMDAL review meeting.</p> <p><b>Technical team of AMDAL Review Commissions</b></p> <p>4. Representative person from SKPD as members of technical team has insufficient understanding of his /her sectoral regulations, policies and AMDAL that may influence the assessment and study findings toward the project plan;</p> <p>5. Independent expert involvement in AMDAL assessment and decision process (including the review of revision results) and its monitoring has not optimal yet;</p> <p>6. Some independent experts of technical team also act as AMDAL compiler;</p> <p>7. Technical team members do not use evaluation form as stipulated in Guideline No. 04 of MOER No. 8/2013 when reviewing AMDAL document;</p> <p>8. Standard or criteria for recruiting technical team members especially independent experts is not available yet;</p> <p>9. The presence of an independent expert according to DPH, mainly as Ad-Hoc members in AMDAL review meeting, is insufficient;</p> <p>10. Not all regional ARCs have experts with certain expertise who can predict, mitigate or reduce impacts occurred by project activities.</p> <p><b>AMDAL Review Commission (ARC)</b></p> <p>11. The role of ARC in decision making especially for government project is still less independent due to their status as civil servants. Sometimes their decision is influenced by the head of local government;</p> <p>12. Rotation of staffs in relevant Government Institutions as members of ARC;</p>

	<p>13. Chairman of AMDAL assessment is less assertive in limiting assessor comments that inappropriate with AMDAL sector being discussed;</p> <p>14. The licensed ARC has less capability in reviewing AMDAL documents due to still many approved AMDAL documents with poor quality.</p>
<b>Recommendation</b>	<p>1. Establishment and monitoring of ARC license shall be reviewed and enhanced. For instance, there shall be staff member of Secretariat who has AMDAL certificate as compiler and assessor;</p> <p>2. Fund availability at Education and Training Institution (<i>Badan Diklat</i>) for regular AMDAL training shall be confirmed;</p> <p>3. Strengthening of team for ARC secretariat in terms of AMDAL technical proficiency is required;</p> <p>4. Mindset for ARC meeting shall be changed into AMDAL discussion and coordination meeting for supporting, solution seeking, and resulting qualified AMDAL document (not as a judging spot);</p> <p>5. Environmental feasibility criteria shall be based on an activity plan with its solution;</p> <p>6. Terminology that describes AMDAL as a scientific analysis shall be averted since there are many other analyses with scientific principle. It is therefore recommended that AMDAL use the terminology of multi-disciplines analysis;</p> <p>7. AMDAL Review Commission shall be modified into Commission for AMDAL Discussion and Coordination.</p> <p>8. AMDAL philosophy shall be recognized not partly by projects, yet, in fact, it is being integrated with development plan in general;</p> <p>9. Chairman of meeting shall have AMDAL acknowledgement and fine capability for meeting management to direct the members in accordance with their expertise. Training of decision-making process for the technical team and AMDAL Review Commission (including the chairman and members) is required;</p> <p>10. The appointment of experts shall be completed with integrity statement;</p> <p>11. The ultimate presence of independent expert in the AMDAL review meeting shall be emphasized as well as the status of technical team membership in which the team must be established independently and functionally;</p> <p>12. Independent ARC should be established in giving recommendation of environmental feasibility without intervention from head of government;</p> <p>13. MOEFOR should develop ethical code for technical team to avoid double agents;</p> <p>14. MOEFOR should develop pool of expert, collaborating with BKPSL to support the regional ARC in seeking the required experts with reliable competency, integrity and accountability as their technical team members.</p>

# **CHAPTER 6**

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## CHAPTER 6 WEBSITE DEVELOPMENT (OUTPUT 5)

### 6.1 Introduction

727. An informal stakeholder network was established at the end of 2009, which aimed to contribute for improving the effectiveness of AMDAL in Indonesia. This network, called Forum AMDAL Indonesia (FAI), operates on a voluntary basis and currently has a very loose structure. The FAI forum is an independent sounding board consisting of individuals from various stakeholder groups (national government, local government, university, consultants, project proponents). FAI's high level of activities demonstrates the desire for changes in AMDAL policies and implementation and it has given Ministry of Environment and Forestry (MOEFOR) many ideas to be considered in preparing regulations and technical guidelines. The forum also demonstrated the need for information exchange among AMDAL stakeholders and the commitment of all parties to find solutions for many issues that have plagued AMDAL implementation in Indonesia.

728. MOEFOR intends to support by providing a website for knowledge management and sharing among AMDAL stakeholders. The aim is to enhance communication among them by allowing sharing of guidelines, best practices, samples of good AMDAL reports, etc. The website is aimed as a way to identify experts for supporting Technical Teams at the sub-national level. Technical guidelines and other publications developed by MOEFOR's AMDAL Directorate will also be disseminated through the website.

### 6.2 Project Management Set-up

729. A software has been set-up as project management tool that located at <http://www.su-css.org/pm/>. By this tool an online collaboration might be established between the consultant team members as well as with the stakeholders. This tool in further could possibly be used within the broader goals of the webportal.

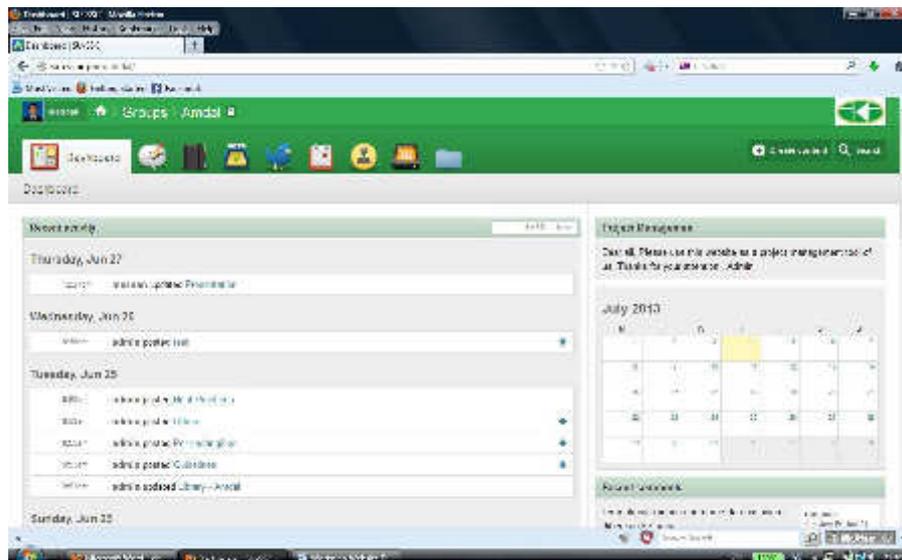


Figure 6-1: Dashboard of URL <http://www.su-css.org/pm/>

### 6.3 Database Design

730. The table below shows the summary of database design for the web portal development.

Field name	Field type	Used in
Body	Long text and summary (module: Text)	<a href="#">Basic page</a> , <a href="#">AMDALdocs</a> , <a href="#">Article</a> , <a href="#">Blog entry</a> , <a href="#">Expert</a> , <a href="#">Forum topic</a> , <a href="#">Group</a> , <a href="#">Regulations</a> , <a href="#">Simple news newsletter</a>
comment_body	Long text (module: Text)	<a href="#">AMDALdocs comment</a> , <a href="#">Article comment</a> , <a href="#">Basic page comment</a> , <a href="#">Blog entry comment</a> , <a href="#">Expert comment</a> , <a href="#">Forum topic comment</a> , <a href="#">Group comment</a> , <a href="#">Regulations comment</a> , <a href="#">Simple news newsletter comment</a>
field_aspect	List (text) (module: List)	<a href="#">AMDALdocs</a> , <a href="#">Regulations</a>
field_contenttype	Term reference (module: Taxonomy)	<a href="#">Expert</a>
field_decision	List (text) (module: List)	<a href="#">AMDALdocs</a>
field_educationbackground	Text (module: Text)	<a href="#">Expert</a>
field_educationlevel	List (text) (module: List)	<a href="#">Expert</a>
field_email	Text (module: Text)	<a href="#">Expert</a>
field_expertise	Text (module: Text)	<a href="#">Expert</a>
field_handphone	Text (module: Text)	<a href="#">Expert</a>
field_image	Image (module: Image)	<a href="#">Article</a>
field_issue	List (text) (module: List)	<a href="#">AMDALdocs</a> , <a href="#">Regulations</a>
field_levelcompetence	Text (module: Text)	<a href="#">Expert</a>
field_linktodoc	File (module: File)	<a href="#">Regulations</a>
field_occupation	Text (module: Text)	<a href="#">Expert</a>
field_office	Text (module: Text)	<a href="#">Expert</a>
field_penyusun	Text (module: Text)	<a href="#">AMDALdocs</a>
field_photo	Image (module: Image)	<a href="#">Expert</a>
field_professionallicense	Text (module: Text)	<a href="#">Expert</a>
field_project	List (text) (module: List)	<a href="#">AMDALdocs</a>
field_publication	Text (module: Text)	<a href="#">Expert</a>
field_rel_regulation	Text (module: Text)	<a href="#">AMDALdocs</a>
field_sector	List (text) (module: List)	<a href="#">AMDALdocs</a> , <a href="#">Regulations</a>
field_simplenews_term	Term reference (module: Taxonomy)	<a href="#">Simplenews newsletter</a>
field_tags	Term reference (module: Taxonomy)	<a href="#">Article</a>
field_topic	List (text) (module: List)	<a href="#">AMDALdocs</a>
field_type	List (text) (module: List)	<a href="#">Regulations</a>
group_access	Boolean (module: List)	<a href="#">Group</a>
group_group	Boolean (module: List)	<a href="#">Group</a>
og_group_ref	Entity Reference (module: Entity Reference)	<a href="#">Group</a>

Field name	Field type	Used in
og_membership_request	Long text (module: Text)	<u>og_membership_type_default</u>
og_user_node	Entity Reference (module: Entity Reference)	<u>User</u>
taxonomy_forums	Term reference (module: Taxonomy)	<u>Forum topic</u>

731. Based on this design, the web portal has been prototyped. A software has set-up a software for the website development prototyping, which located at this url <http://www.su-css.org/sucss/>. This prototype allows an online content publishing, collaboration and testing of the functionalities establishment between the consultant team members as well as with the stakeholders.

## 6.4 Taxonomy of the Content

### Knowledge Structure

732. In the use of this website as an application domain of knowledge management in EIA, it is important to build content that can be managed in a structure for all stored knowledge and information might be easily retrieved. For this purpose, the site provides a structured terminology in the domain of EIA with a taxonomy associated to the EIA knowledge management in Indonesia.

733. For building the structured knowledge, it is first construct taxonomy as shown in the following chart.

## KNOWLEDGE STRUCTURE

### Sectors

- Multi sectors;
- Agriculture;
- Industry;
- Defense;
- Treatment on toxic and hazardous wastes;
- Tourism;
- Marine and Fisheries;
- Transportation;
- Nuclear Power;
- Forestry;
- Energy and Mining Resources;
- Satellite Technology;
- Residences and Settlement Area;
- Public Works.

### Aspects

- Ecology;
- Socio-culture
- Public Health;
- Physical-chemical;

### Issues

- **Bio-diversity;**
  - **Climate Change;**
  - **Socio-economy;**
  - **Involuntary Resettlement;**
  - **Indigenous People;**
- Topics**
- **Geothermal;**
  - **Spatial Plan;**
  - **Water Resources;**
  - **Flood Management;**
- Content Type**
- **Events;**
  - **Templates;**
  - **Success Stories;**
- Regulations**
- **Laws;**
  - **Government Regulations;**
  - **Minister Regulation;**
  - **Regional Regulation;**
  - **International;**
  - **EIA Documents;**
  - **Experts Database;**
  - **Best Practices;**
  - **Forums;**
  - **Projects;**
  - **News;**
  - **Mailing List;**
  - **Guidelines;**
  - **Articles;**
  - **Blogs.**

734. Through the taxonomy building, all the written content on this website can be categorized into one of the extensions to the vocabulary of the taxonomy construct (knowledge structure).

735. When we click the menu on the left side of the website, as shown in the figure below, the website will display all the information related to the terminology. In the following picture, the sub menu "*Perikanan dan Kelautan*" is clicked on the menu of Knowledge Structure. The system then displays all the information related to the terminology "*Perikanan dan Kelautan*". Hence we can do the similar procedure to seek knowledge related to the terminology that we have clicked.

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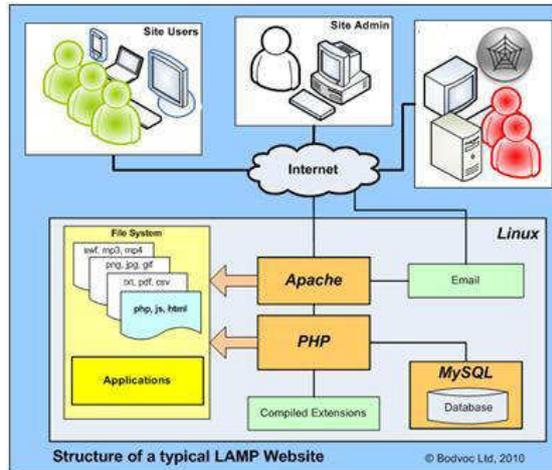


Figure 6-3: Illustration of Principal Component in the Architecture of a Typical LAMP Web Server

739. The principal components of LAMP based on its architecture and functions are as follow:

### 6.5.1 Linux

740. The Linux operating system provides the platform for secure and reliable operation of the web server. Access to the file system is governed by file permissions and enforced by the operating system. The operating system also provides interfaces to the networks and enforces process and user security.

741. When a user requests a page or content from the web server, Apache receives the HTTP request and interprets the contents. For example, Apache will determine whether a file extension has been supplies as part of the request. If so, it will determine whether the requested resource is a static items, e.g. a simple web page stored as an HTML file, or whether the requested item relates to an application, e.g. a PHP file. Depending on the complexity of the requested item, Apache may be required to locate and respond with a number of resources, e.g. the basic HTML file, CSS files, Java script, images and other media like MP3 audio files of SWF video files. Apache determines where to locate the content based on the path specified in the HTTP Request and the file paths identified in the HTML content.

### 6.5.2 PHP

742. Increasingly users expect to be provided with dynamic content, which may be influenced by time, current events, the user's location or personalization. With these more complex websites, static HTML pages are largely replaced by applications. One of the most popular scripting languages is PHP and there are a wide range of applications available including content management systems (CMS) like: Joomla!; forums; bulletin boards; shopping carts, etc.

743. For a dynamic site, the Apache web server is configured to recognize when a script needs to be run, this may be through a combination of file extensions and default settings. For example, if a website's home page is requested and the server has PHP installed, Apache will seek an index.php file

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in the root directory if there is no index.html file in the website root directory. It is this mechanism which is used to initialize applications like Joomla! The PHP scripts will be used to store and retrieve information and to render the HTML page layouts for transmission back to the user's browser by the Apache web server.

### **6.5.3 MySQL**

744. Typically a PHP website will also use a MySQL database to store content and configuration information. It is possible to build sites where the contents are stored in flat text files, but the use of relational databases like MySQL gives greater flexibility. The interaction between the Apache web server and the MySQL database is handled by PHP.

## **6.6 The Knowledge Management Portal**

745. The knowledge management framework that would be developed based on this architecture can support a relatively small but diverse community of practice, mixing NGOs, governments and business development organizations, allowing good practices to be qualified, shared and translated into practical expertise.

746. A knowledge management system would seem provides a solution. It may cover from the simple to the more complex system. In fact, the systems shall be cheap to be implemented and run. It would support such functional requirements for the system as following:

- Document uploading, searching and downloading;
- Some kinds of categorisation system;
- System for tracking issues and questions and linking them to the researching body and then providing answers;
- Formall recording of what we have learned in the workplace is a worthwhile process that is often forgotten or not undertaken since there is no time or immediate incentive to do so. Web-based technologies such as wikis and blogs that have enabled people to quickly publish and publicise their knowledge within their peer group is potentially a very powerful means of undertaking collaborative knowledge capture. This portal can be used to facilitate this process in a community-centric manner. The integrated feature the portal is neither a dedicated blogging nor wiki platform, but modules exist that support both functions along with taxonomies for categorising the content.

## **6.7 Front Page**

747. Below is the design of front page for the web portal. This front page will be subject to changes and revisions.



Figure 6-4: Design of Front Page for the Web Portal

748. The front page has a functional search, which may be advanced for more particular search as shown below.

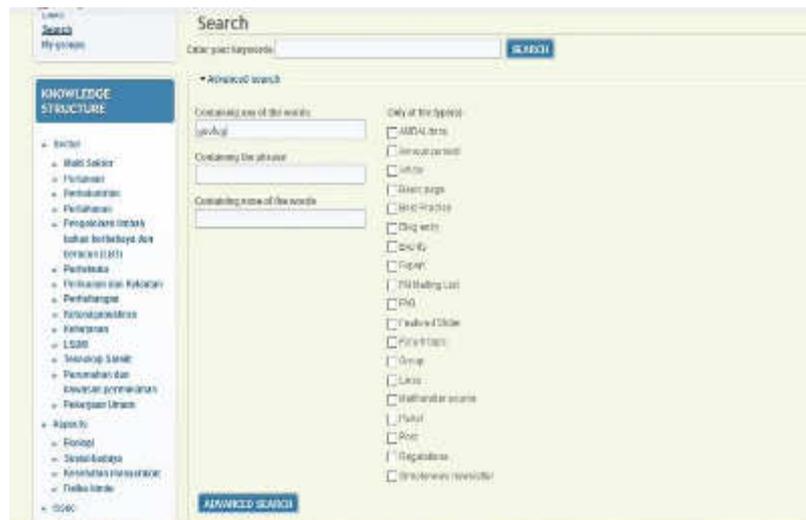


Figure 6-5: the Search Functionality in the Front Page

749. Result of the advanced search with keyword (for example "geologi") can be seen in below figure.



Figure 6-6: The Result of the Functional Search in the Front Page

## 6.8 Expert Database

750. This area will allow to know who your colleagues are and what they do. In addition, for providing employee directories and organization structures, it may offer the function of locating expertise. A key focus of implementing knowledge management is the 'mobilization of collective intelligence'. If you are seeking knowledge, as well as the content available to you, you may wish to find colleagues who have skills, expertise or relevant experiences. Upon locating them in the process of meeting a challenge, you can either make contact with them off-line from the webportal or invite them to join in discussion with you. Users with relevant expertise may also find you, for example, if they are monitoring new discussions or stories within a given category. Below we have identified the information that could be presented to the user regarding their colleagues. This would complement any diagrammatic representation of structures.

- Biodata
  - Name;
  - JobTitle;
  - Office/Department;
  - Occupation;
  - Photograph;
  - Contact details, such as telephone numbers or e-mail addresses;
  - Resume: A brief summary of their CV;
- Expertise: The specific area where they offer either practices or interests;
- Sectors: Field sector of the expertise;
- Level/age of expertises;
- Licences;
- Education background;
- Publications;
- Experiences.





## 6.9 Institution Database

- Government
  - Central Government Agencies;
  - Local Government Agencies.
- Non-Government
  - Universities;
  - Training Providers;
  - Licence Providers;
  - NGOs;
  - Consultants.
- Institution database will contain data related to a knowledge base system such as following:
  - Experts/Human Resources;
  - Certifications;
  - Projects;
  - Capacity.

## 6.10 Communication

754. There are some communication methods available for users to communicate with one another through a web portal, such as replying to posts, commenting on content, or posting on their profiles. So if there is a need to contact a user, we may can contact them publicly.

### 6.10.1 Mailing lists

755. The availability of functions in sending emails to our users can be afforded through the set-up of the mailing lists for group of user or stakeholders related to a particular domain of interest. One of these functions is such a simple news, i.e. a system for managing newsletters. This system requires users to subscribe to the mailing list.

756. Besides allowing us to run our own email newsletter service from within the webportal, we will also use a mailing list system such as Mailman.

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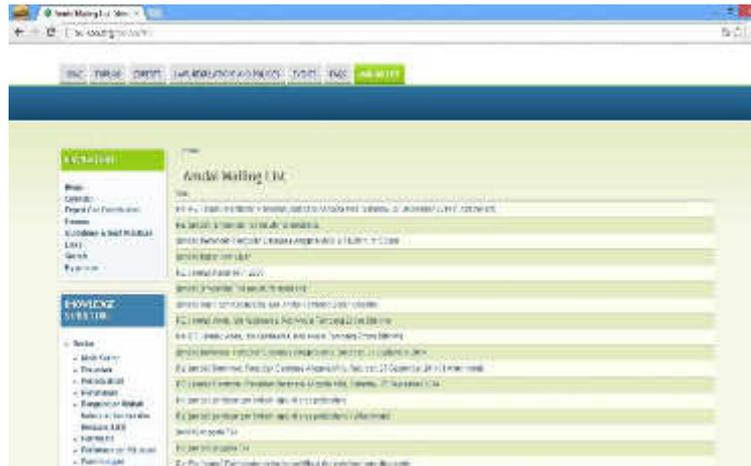


Figure 6-10: Page List of Data from FAI Mailing List

### 6.11 Collaboration

757. Knowledge is Power – this unfortunately often leads to the perception that we should retain knowledge for our own security or future advantage. However, this does not assist the development of a reusable corporate memory. We must therefore foster a spirit of collaboration by establishing a sense of community, encouraging electronic conversation and supporting the social mechanics of a operations. We assisted by the fact that today’s intelligent, creative and perceptive workforce (‘knowledge workers’) typically seeks intangible benefits from their working experience. These include the opportunities for learning, personal development, collaboration and teaming. The web portal can become a forum where they can apply these goals. There are a number of methods that can be used to facilitate community activity and collaboration.

Discussion Forums	Discussion threads are a widely accepted method for gaining the contribution of tacit knowledge (intellectual capital). They can lead to the uncovering of experiences from across the corporate ‘mind’ and break down and traditional barriers of communication. Discussions can also take place around lighter themes to attract users to use of the webportal. Discussions could be created in their own right or be stimulated (and therefore linked to) another knowledge item, such as an opinion or a story.
Interviews	Interview is a fun way to facilitate the contribution of experiences.
Polls	Polls and voting are fun ways of seeking opinions and helping to reach decisions.
Personal Ads	There are many ways to attract users to use the web portal by offering non-business features. These include the placing of personal advertisements.
Events	Both social events and key activity dates (for example, product launches, training sessions and workshop, FGDs and meeting events).

### 6.11.1 Discussion Forum

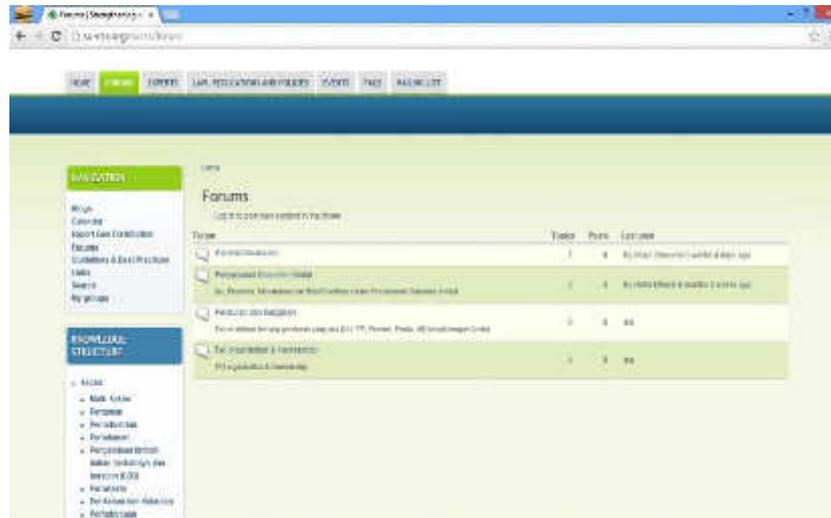


Figure 6-11: Page View for Forum

758. For the creation of a new forum, the form of data entry below show the administrator who can create the new forum. Based on this new created forum people may conduct discussion whereby each one has a topic to bring in.

Figure 6-12: Page View for Data Entry Form

759. Details of topic for discussion forum is shown in following figure.



Figure 6-13: Page View for Detailed Topic of Discussion Forum

760. The following form page shows the form for data entry on the discussion of a certain topic.

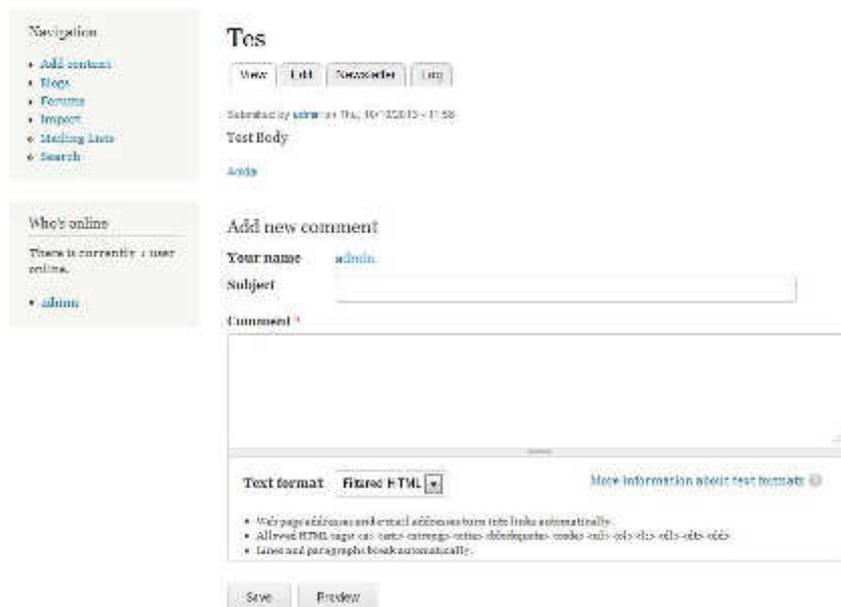


Figure 6-14: Page View for Detailed Discussion Forum

### 6.11.2 Interviews

761. A web portal tool shall be provided for contributing the interviews with text presented to user as an internet document.

Description	The unique description for this item, briefly summarizing the subject matter/direction of the interview.
Interviewee	Who is being interviewed.
Interviewer	Who has performed the interview.
Date	The date of contribution for a user can make a value judgement on its currency.

### 6.11.3 Events

Description	The unique description for the event.
Date	The date of the event.
Location	The venue of the event.
Attendance	Who is the event is open to.
Contact	Who to contact regarding further information relating to this event.

## 6.12 Knowledge Base Design

762. Below are the steps of life-cycle in knowledge management:

- Knowledge Creation - Knowledge is created either as explicit or tacit knowledge. Explicit knowledge is put in paper or electronic format. It is recorded and made accessible to others. Tacit knowledge is created in minds of people. This knowledge resides within individuals. This knowledge needs to be transformed into explicit knowledge so that it can recorded and shared with others in the organization;
- Knowledge Storage - Knowledge is stored and organized in a repository. The decision on how and where lies with the organization. But the objective of this phase is enabling organization to contribute, organize and share the knowledge with;
- Knowledge Sharing - Knowledge is shared and accessed by people. They can either search or navigate to the knowledge items;
- Knowledge Utilization - This is end goal of knowledge practice. The knowledge management does not have any value if created knowledge is not utilized to its potential. More knowledge is created as knowledge that has been applied and utilized.

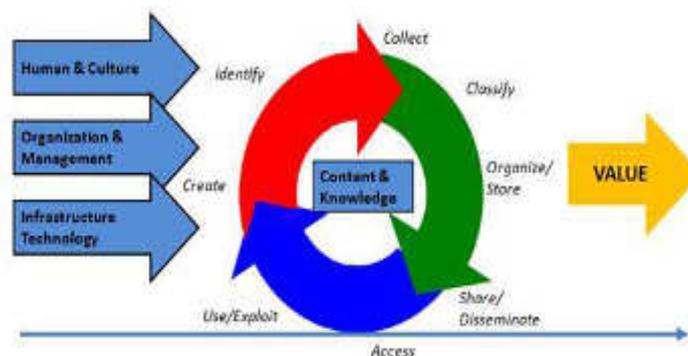


Figure 6-15: The Steps of Life-Cycle in Knowledge Management

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763. The principles behind the design and management of web portal site should be the same as those desired for common internet site: attractive, easy to navigate, fresh, reliable, accurate and up-to-date. This web portal would be organized in much the same way, with a Home Page that providing a gateway to the available content. Inherent to this ideas is that the web portal should be database-driven and dynamic, rather than a hierarchy of manually maintained static pages. This facilitates the query, contribution and management of content. Firstly, we propose identification the types of content (or Items) that contain information and knowledge. We suggest a number of broad groupings below for clustering purposes, such as:

- News;
- Policies/Regulations/Laws;
- Articles;
- Frequently Asked Questions (FAQs);
- Links;
- Community.

764. The formats for each of these are further analyzed below. We also recommend that as one of the Profile criteria for each item, do establish a standard subject hierarchy (or 'taxonomy').

765. To support the query features described later, you will probably wish to take advantage of people's internet navigational experience and offer hierarchical browsing. We suggest to focus on two options:

- A navigation bar based upon the taxonomy, with items available by type with the lowest subject category level; or
- A navigation bar based upon item type with the onward presentation of lists organized by subject category.

766. We should remember that a Knowledge Management Web portal should be an 'open' resource without the perceived imposition of the cultural barriers that organization by business function might reflect. Users should have a 'Favourites' area where they can bookmark or monitor categories, sub-categories or individual items, such as a discussion thread or story. Procedures may require incorporation so that new content contributions are reviewed and approved prior to publication. We strive to automatically archive types of item when they reach a certain age.

### **6.12.1 News**

767. News keeps employees to be informed and involved. It can used as well as a method for recognition and salutation. Typically this would include internal news advertising for example success stories, services announcements, campaigns and social events. Within this area we could also publish press releases and newsletters. It might also include externally sourced news, offering for example trainings or seminar events. As with all web portal content, you will have to make a decision on how to structure a news item. A suggestion is provided below. This shows how the content will be presented to the user. A web portal tool would be provided for the contribution of news with the text represented to the user as an internet document.

Description	The unique description for this piece of text.
Author	The user who contributed the news.
Date	The date of contribution for a user can make a value judgement on its currency.
Source	The source if it is copied from an external source.
Summary	A single paragraph summary will allow a user to more quickly assimilate a number of news items and make a value judgement on the relevance of a particular piece to their current needs.
Text	The main text of the news item
Comments	Every piece of information should be organic – users should be allowed to add comments or reviews in order to contribute their views and experiences. In this way, information is transformed to knowledge.

768. Below is the snapshot of news content page on the developed web portal, whereby the summary and the tags were presented in teasing display.

**Kesepakatan Para Menteri Lingkungan Hidup Negara-Negara ASEAN – IAMME ke 14**  
 Submitted by admin on Thu, 10/02/13 - 15:42



Surabaya, 26 September 2013. Seluruh rangkaian acara 14th Meeting of the Informal Ministerial Meeting on Environment (IAMME) and Related Meetings yang diselenggarakan di Surabaya sejak tanggal 23 September 2013 berakhir siang ini dengan menghasilkan berbagai kesepakatan. Menteri Lingkungan Hidup Republik Indonesia, Prof. Dr. Balthasar Kambaya, MBA resmi menutup seluruh rangkaian acara ini dengan menyampaikan apresiasi kepada seluruh peserta atas partisipasi aktifnya.

Tags:  
[Hotspot Monitoring Centre](#)

[Read more](#) [Log in or register to post comments](#)

Figure 6-16: Snapshot of News Content Page on the Developed Web Portal

769. By clicking on the Read More hyperlink, we will have a full text view of the news whereby at the bottom. Authenticated users will be able to put comments as shown below.

Myanmar, Filipina, Thailand dan Vietnam, serta mitra Menteri Lingkungan Hidup atau yang mewakili Menteri dari China, Korea Selatan dan Jepang.

Add new comment

Your name:

Subject:

Comment \*

Text format: Filtered HTML [More information about text formats](#)

- Web page addresses and e-mail addresses turn into links automatically.
- Allowed HTML tags: <a> <em> <strong> <cite> <blockquote> <code> <ul> <ol> <li> <dl> <dt> <dd>
- Links and paragraphs break automatically.

Figure 6-17: Page View for Adding New Comment

### 6.12.2 Policies/Regulations/Laws

770. The web portal site is a vehicle to propagate best practices. The site can offer a corporate library of internet text and hyper-linked documents that summarizing corporate policies, business processes, methodologies, manuals, staff handbooks, standard operating procedures and work instructions. The library could provide access to and explanations for the use of recommended office document templates.

Description	The unique description for this item.
Author	The user who has written the document or is responsible for its authorization.
Hyper-link	To an underlying file.
Date	The date of contribution for a user can make a value judgement on its currency.
Purpose	The applicability of this policy, etc., to a business purpose for assisting users who may be uncertain as to which reference they required. The email address of a consultant who can offer assistance may be displayed.
Text	The body text for any policy, etc., where this is published as an internet documents rather than an underlying word processed or PDF file, etc., resident on the network.
Comments	Contribution of experiences relating to use of policies although this is more likely to be best contributed elsewhere as an opinion, discussion, or FAQ.

771. For the above mentioned purpose, we would like to introduce a menu block for displaying a list of regulations related to AMDAL. This list can be detailed if we clicked on the hyperlink of the titles. Webpage for references on AMDAL regulations is shown below.

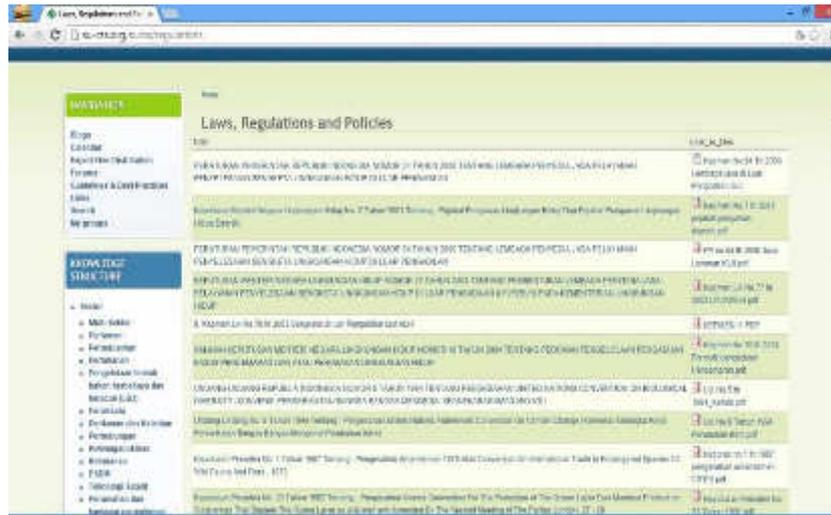


Figure 6-18: Webpage for Reference for AMDAL Regulations

772. The detailed information of regulation page is shown below in which we may see the link to download the document to local workstation. These references were categorized in Reference Types and References Aspect. In the figure, the type in Minister Regulation (*Peraturan Menteri/Permen*) and the aspect is about Public Health (*Kesehatan Masyarakat*).

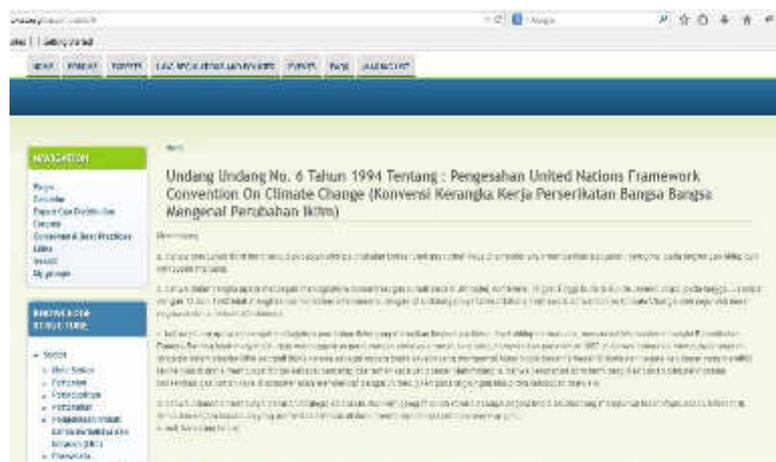


Figure 6-19: Webpage of References for AMDAL Regulations

### 6.12.3 Articles

773. Article is a document (internet, office, PDF, image, etc.) that contains reusable knowledge for all users to access. We envisage the web portal as a publication medium for those documents, irrespective of their place within a filing system, that contain such reusable knowledge. We propose a variety of article types as follow:

Stories	Whilst a business will capture an audit trail of inputs and outputs relating to a decision, transaction, project, solution etc., this does not always establish the fullest narrative of this activity, especially in capturing the decision logic and experiences. We are natural story-tellers and this is an excellent method of encouraging the voluntary contribution of knowledge. We recommend that a story is created for every challenge which is met that offered reusable value to others. This would provide a corporate memory of both best practice and lessons learned.
Ideas & Opinions	For example, a (Dear Sir) letter to the editor format.
Notes	Where a user can add a brief note regarding a matter, for example a summary of experiences and experiences after a conference visit.
References	Useful documents, such as project reports, proposals, product specifications, users manuals, price lists, marketing collateral, electronic demos, presentations and sales scripts, maps and directions.
Publications	Sign-posting to hard copy or physical materials that are not available in digital format.

#### 6.12.4 Stories

774. A web portal tool would be provided for the contribution of stories, with the text represented to the user as an internet document.

Description	The unique description for this item.
Author	The user who has written the story.
Date	The date of contribution so that a user can make a value judgement on its currency.
Role of Author	The user role in relationship to the context of the story for example, Project Manager.
Task	A brief description of the task being undertaken (such as the problem to be solved, decision to be made, solution to be created) that led to the narrative of the story.
Solution	A brief summary of the outcome of the story.
Purpose of the Story	A brief summary of the narrative direction or focus of the story.
Story	The main body of the text, representing a narrative of the work undertaken, judgements made, best practice followed, references used, etc. This does not however, take the form of a log of activities, which is better recorded in project management system. However, sign-posting can be made to any useful supporting input/output data in such systems, as also to documents, publications or web sites.
Nota Bene	Any useful asides which have come to light.
Comments	A place for users to add their thoughts or enhance the story with their own experiences.

### 6.12.5 Ideas and Opinions

775. A web portal tool would be provided for contributing ideas and opinions with text presented to user as an internet document.

Description	The unique description for this piece of text.
Author	The user who has made the contribution.
Date	The date of contribution for a user can make a value judgement on its currency.
Text	The main body of text wherein the user expresses a view, idea or opinion.
Comments	A place for users to add their views on the contribution. For more interactive contributions, Discussion threads may be started. Please refer to the Community section below.

776. The tools for supporting this function will be based on the Blogs Pages, whereby only authenticated users can write blogs on the web portal. The result of the developed blogs pages is shown in the figure below.

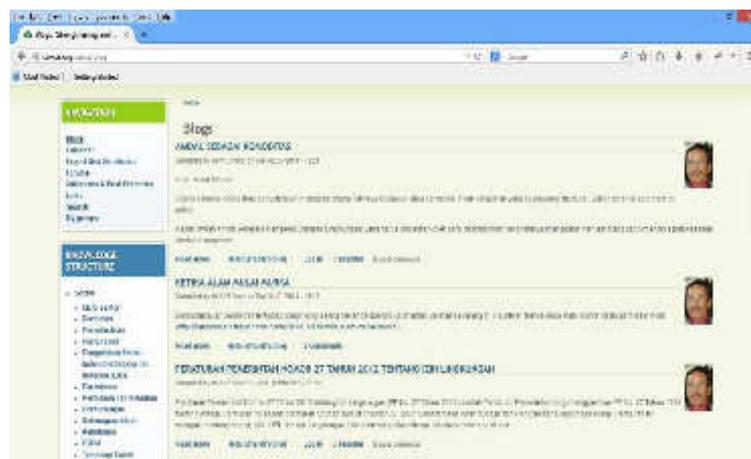


Figure 6-20: Result of the Developed Blogs Pages

Detail of the blog content can be seen in below figure.



Figure 6-21: Detail of the Blog Content

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### 6.12.6 Notes

777. A web portal tool will be provided for contributing of notes with text presented to the user as an internet document.

Description	The unique description for this piece of text.
Author	The user who has made the contribution.
Date	The date of contribution for a user can make a value judgement on its currency.
Text	The main body of text.

### 6.12.7 References

Description	The unique description for this document.
Author	The user who has written the document or is responsible for its authorization.
Date	The date of contribution for a user can make a value judgement on its currency.
Version	The revision number of this document, if applicable.
Version Comment	Any revised comment to identify briefly how this version has changed, if applicable.
Hyper-link	To an underlying file.
Abstract	A brief summary of the content of the document allowing the user to make a value judgement as to its relevance to the context of their current activity.
Comments	A place for users to add their comments on the use of these references.

### 6.12.8 Publications

Description	The unique description for this publication
Author	The 'author' of the material, if applicable. This could be an individual or a production company.
Date	The date of contribution for a user can make a value judgement on its currency.
Publication Type	For example book, magazine, journal, video, CD etc.
Location	A sign-post to the physical location of the material. A url could be input pointing to an e-commerce site where the item is for sale or where further abstracts exist etc.
Abstract	A brief summary of the item allowing the user to make a value judgement as to its relevance to the context of their current activity.
Review	A place for users to add their comments on or reviews of the use of these publications.

### 6.12.9 FAQs (Frequently Asked Questions)

778. We all find ourselves at times asking or being asked the same question. Personal productivity can be improved by providing a library of the questions and answers. A web portal entry form would be provided for the contribution of FAQs with the text presented to the user as an internet document.

Question?	Typically a single sentence question.
Answer	The answer, which can also sign-post any other references or provide an e-mail link to member of staff who can provide further assistance.
Author	The user who has written the Question & Answer or is responsible for its authorization.
Date	The date of the FAQ for a user can make a value judgement on its currency.
Comment	A place for users to enhance the answers from their own personal experiences.

779. The result of the developed FAQs page is shown in the figure below.



Figure 6-22: Result of the Developed FAQs Pages

780. By clicking on the hyperlink in the question text, answer page will be displayed as shown below.



Figure 6-23: View of Answer Page

## 6.12.10 Links

781. This section provides a library of useful links to internet sites. We propose classification into different site types as following:

Companies	Links to the sites of your key customers, suppliers, etc.
Search Engines	Links to the search engines which users have found useful.
Directories	Links to the directory sites where your company is listed and/or which are useful for marketing, procurement, etc.
Discussions/Portals	Links to forums that support your industrial sector.
Reference	Links to e.g. train, airline, weather or street-map sites, etc.



Figure 6-24: Page View of Links

782. The data input for the list of links to related to local institutions is listed in the table below.

Organisation	Website
PLH Pontianak	<a href="http://blh.pontianakkota.go.id">http://blh.pontianakkota.go.id</a>
BLHD Tangerang Selatan	<a href="http://blhdkotatangsel.com">http://blhdkotatangsel.com</a>
BLH Palangkaraya	<a href="http://blh.palangkaraya.go.id">http://blh.palangkaraya.go.id</a>
BLH Grobogan	<a href="http://blh.grobogan.go.id">http://blh.grobogan.go.id</a>
BLH Muara Enim	<a href="http://blhmuaraenim.com">http://blhmuaraenim.com</a>
BLH Surabaya	<a href="http://lh.surabaya.go.id">http://lh.surabaya.go.id</a>
BLH Bantul	<a href="http://blh.bantulkab.go.id">http://blh.bantulkab.go.id</a>

BLH Pekanbaru	<a href="http://blh.pekanbaru.go.id">http://blh.pekanbaru.go.id</a>
BLH Palembang	<a href="http://blh.palembang.go.id">http://blh.palembang.go.id</a>
BLH Maluku Utara	<a href="http://blhmalut.net">http://blhmalut.net</a>
BLH Bali	<a href="http://blh.baliprov.go.id">http://blh.baliprov.go.id</a>
BLH Sulawesi Utara	<a href="http://www.blh.sulutprov.go.id">http://www.blh.sulutprov.go.id</a>
BLH Sulawesi Tengah	<a href="http://blh.sulteng.go.id">http://blh.sulteng.go.id</a>
BLH Kalimantan Timur	<a href="http://blh.kaltimprov.go.id">http://blh.kaltimprov.go.id</a>
BLH Kalimantan Timur	<a href="http://kalteng.lingkunganhidup.net/">http://kalteng.lingkunganhidup.net/</a>
BLHD Kalimantan Barat	<a href="http://blhd.kalbarprov.go.id">http://blhd.kalbarprov.go.id</a>
BLH Jawa Timur	<a href="http://blh.jatimprov.go.id">http://blh.jatimprov.go.id</a>
BLH D.I Jogjakarta	<a href="http://blh.jogjaprov.go.id/">http://blh.jogjaprov.go.id/</a>
BLH Jawa Tengah	<a href="http://blh.jatengprov.go.id/">http://blh.jatengprov.go.id/</a>
BPLHD Jawa Barat	<a href="http://www.bplhdjabar.go.id">http://www.bplhdjabar.go.id</a>

783. For international links, there are block to display links to international related institution as well as links to related information system as shown below.



### 6.13 Best Practices

784. Best Practices can be provided by an example of good AMDAL document. Below is the data entry form for the website maintainer to publish data on good example of AMDAL document.

### 6.14 FAI Member Login

785. One of the component in the modern website management is the feature for user management. This website is equipped with user management that can be accessed by the administrator. It is expected that the user may contribute for the content input and using the website for collaboration among users.

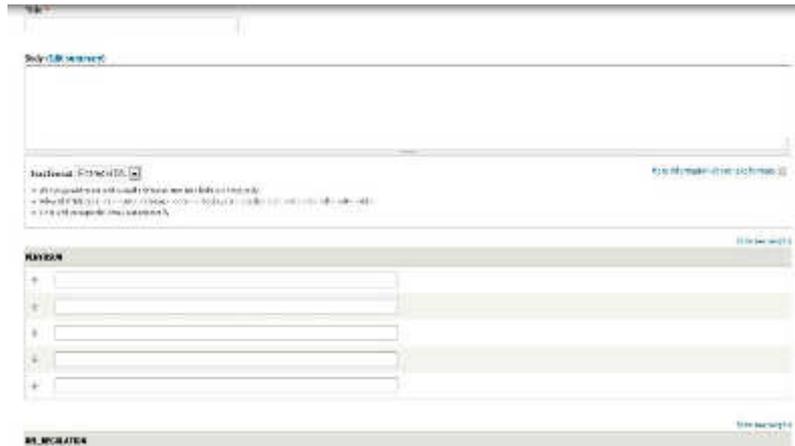


Figure 6-25: Page View of Data Entry Form for the Website Maintainer

### 6.15 Consultation, Socialization and Training with FAI

786. The consultation was held on January 9, 2014 with FAI related content of website. FAI board of management that have attended in this meeting are Mr. Anhar Kramadisastra (Chief), Mr. Imam Soeseno (Secretary), Mr. Tonny H. Gultom (Treasury) and Ms. Isna Marifa (honorary member). FAI requested that the website may accommodate all information and communication that had been conducted by FAI members in mailing list such as regulations, technical guidance, best practice, etc. To introduce FAI in wider area, website shall be put into Google ontology for if there is people who would like to obtain information about FAI they may use Google search easily since currently, FAI only famous among its member.

787. Socialization to FAI member was held on June 12, 2014 in "FAI Rundown Agenda". In this socialization, it had been explained about the web design planning as follows :

- Content Development
  - Expert Database;
  - News;
  - Links;
  - Rules and Regulation;
  - Forum;
  - Events;
  - Best Practices;
  - Mailing-list;
  - Blogs.
- Website Operation
  - Operator Appointment
- Security Control
  - User Login;
  - Level of Access;
  - User Groups;
  - Contents Visibility.
- Implementation
- Roll-out

788. Training to FAI member was held on September 9, 2014 by applying "*Panduan Pengelolaan Web*" (Web Management Guideline) that attached in Appendix-5 of Compilation of Workshop Material and Guidelines. The training session was also designed to include aspect of User Acceptance Test where requirements of the user were discussed and then seeking for solution.

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