



October 2019

Indonesia: Perusahaan Listrik Negara (PLN) Agency-Level Use of Country Safeguard Systems

Acceptability Assessment of Environmental Safeguards

This assessment is a work in progress, the purpose of which is to encourage an iterative process of feedback and update. The materials are prepared by consultants, hence ADB does not guarantee the accuracy, reliability, or timeliness of these materials and therefore will not be liable in any capacity for any damages or losses that may result from the use of these materials. ADB, likewise, shall not be responsible for any errors, inadvertent omissions, or unauthorized alternations that may occur in the disclosure of content of this website.

ABBREVIATIONS

ADB	– Asian Development Bank
AMDAL	– <i>analisis mengenai dampak lingkungan</i> (environmental impact assessment)
ANDAL	– <i>analisis dampak lingkungan</i> (environmental impact assessment report/addendum)
CSS	– country safeguard systems
EMMP	– environmental management and monitoring plan
ISO	– International Organization for Standardization
DIVHSSE	– Divisi Keselamatan, Kesehatan Kerja, Keamanan dan Lingkungan (PLN Occupational Health, Safety, Security and Environment Division)
MOEF/KLHK	– Ministry of Environment and Forestry (Kementerian Lingkungan Hidup dan Kehutanan/KLHK)
PLN	– Perusahaan Listrik Negara (State Electricity Company)
PROPER	– <i>Program Penilaian Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup</i> (Program for Pollution Control, Evaluation, and Rating)
RBL	– results-based lending
RKL-RPL	– <i>Rencana Pengelolaan Lingkungan Hidup–Rencana Pemantauan Lingkungan Hidup</i> (environmental management and monitoring plan)
SPPL	– <i>surat pernyataan kesanggupan pengelolaan dan pemantauan lingkungan hidup</i> (commitment letter for environmental management and monitoring)
SPS	– Safeguard Policy Statement
UI	– <i>unit induk</i> (organizational units)
UIP	– <i>unit induk pembangunan</i> (PLN regional construction units for power generation and transmission)
UIW	– <i>unit induk wilayah</i> (previously referred to as PLN Wilayah)
UKL-UPL	– <i>Upaya Pengelolaan Lingkungan Hidup–Upaya Pemantauan Lingkungan Hidup</i> (initial environmental examination/IEE)
UPP	– <i>unit pelaksanaan proyek</i> (PLN project implementation units)

NOTE:

In this document, “\$” refers to US dollars.

CONTENT

	Page
I. INTRODUCTION	1
II. METHODOLOGY	1
III. SUMMARY OF FINDINGS	4
IV. ENVIRONMENTAL SAFEGUARD ACCEPTABILITY ASSESSMENT ACTION PLAN	17

APPENDIXES

1. Summary of Projects Assessed for Environmental Acceptability	58
2. Organogram of PLN Occupational Health, Safety, Security and Environment Division	62
3. Organogram of Project Construction Unit	63
4. Organogram of Project Implementing Unit	64
5. Organogram of Regional Offices	65

I. INTRODUCTION

1. This acceptability assessment for environmental safeguards evaluated the institutional capacity, implementation practices, outputs and outcomes of the headquarters and regional offices¹ of Indonesia's State Electricity Company, Perusahaan Listrik Negara (PLN). The assessment was based on compliance with applicable government laws and regulations as well as environmental safeguard procedures established by PLN itself. To fill gaps identified in the acceptability assessment, the Asian Development Bank (ADB) and PLN will agree on specific gap-filling measures to be included in an action plan.

II. METHODOLOGY

2. This acceptability assessment employed the following methods:

- (i) **Literature review.** Documents reviewed included PLN sustainability reports; statistics; and reports and other project documentation for power generation plants, transmission lines, and distribution lines constructed and operated by PLN. Additionally, for projects where ADB provided financing to PLN, implementation mission reports, environmental monitoring reports, results-based lending (RBL) verification reports, project completion reports, and program safeguard systems assessments were reviewed.
- (ii) **Institutional capacity review.** This review referenced the acceptability assessment of PLN completed in 2017 as part of an ADB Country Safeguard Review, PLN's internal regulations related to environmental safeguard, organograms of PLN units that have responsibility for environmental safeguard application, detailed staffing and budget information provided by PLN, PLN's capacity development program, and project implementation monitoring reports.
- (iii) **Project assessments.** Selected PLN projects were evaluated to appraise environmental safeguard-related institutional capacity, processes and procedures, and outputs and outcomes. A combination of field visits, interviews, and desk study were completed to assess PLN's performance in the conduct of environmental assessments and project implementation monitoring. Interviews were completed with affected persons and other stakeholders, PLN officials and field staff, and officials from other government agencies working with PLN on environmental safeguards. All projects assessed were Category A or B, according to ADB's categorization, and included environmental impact assessments (*Analisis Mengenai Dampak Lingkungan/AMDAL*) of new projects which posed potential significant impacts, initial environmental examinations (*Upaya Pengelolaan Lingkungan Hidup-Upaya Pemantauan Lingkungan Hidup/UKL-UPL*) for new projects which posed less significant impacts, and environmental impact assessment addenda (*Analisis Dampak Lingkungan/ANDAL*) and environmental management and monitoring plans (*Rencana Pengelolaan Lingkungan Hidup-Rencana Pemantauan Lingkungan Hidup/RKL-RPL*) for expansions of existing projects. A summary of projects assessed for environmental acceptability is provided in Appendix 1.

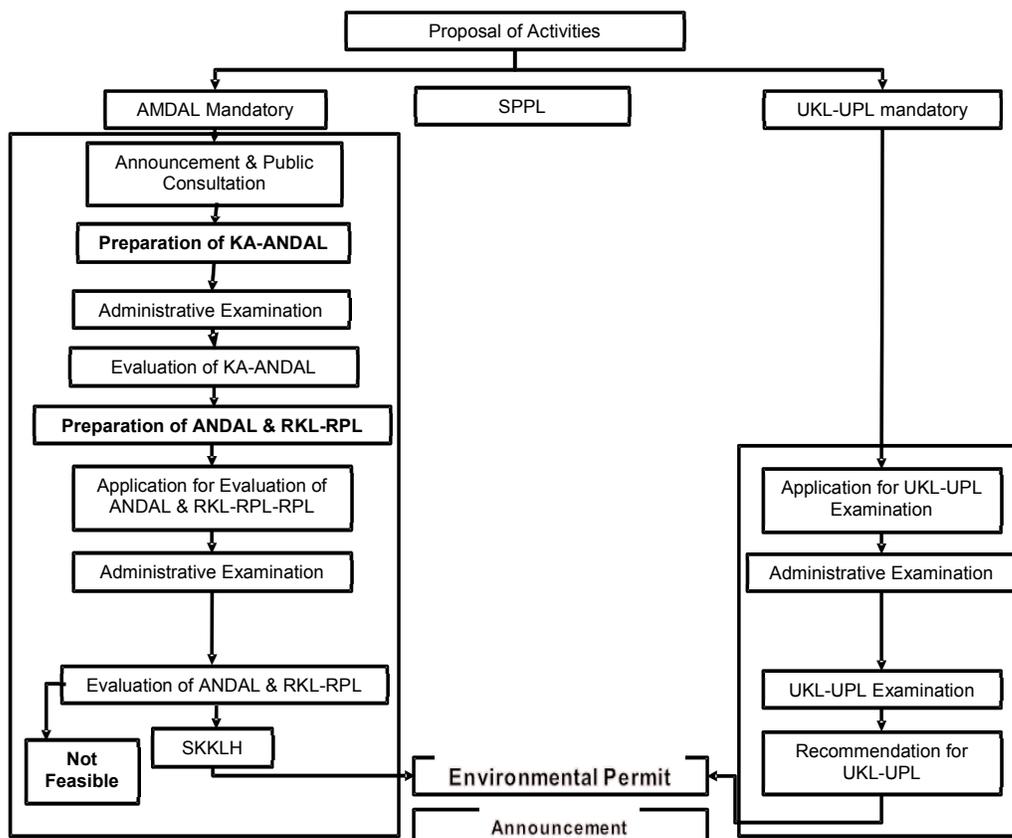
¹ Regional offices include UIP which are the main development units for power generation and transmission, UPP which are the project implementation units, and UIW which are the PLN operational administrative offices.

- (iv) **Focus group discussions and public consultations.** The acceptability assessment methodology was explained to stakeholders during focus group discussions. The acceptability assessment findings and action plan have also been discussed with PLN technical staff and management. Additional public consultations conducted to obtain further feedback guided finalization of the acceptability assessment, including the action plan.
3. The acceptability assessment covers three specific components:
- (i) **Institutional capacity.** Institutional capacity refers to PLN's capacity and commitment to carry out its responsibilities for complying with the PLN country safeguard systems (CSS), which encompasses primary environment Law no. 32/2009 on Environmental Protection and Management and its implementing regulations, which include regulations on environmental permits, AMDAL criteria, and guidelines for environmental document preparation, other relevant national laws and regulations, and corporate decrees issued by PLN. This component encompasses nine subcomponents: institutional structure, budget, staffing, institutional knowledge management, technical expertise, legal counsel, supporting equipment and facilities, in-house or training center capacity building program, and supervision and monitoring responsibility.
- (ii) **Process and procedure.** This component looks at PLN's implementation practices of the PLN CSS and considers the coherence, transparency, consistency, and effectiveness of these practices. This component encompasses twelve subcomponents: compliance with national and PLN regulations and procedures, targets to assess PLN environmental performance, coordination with other bodies responsible for permits and approvals, incorporation of pollution control and hazardous waste handling into environmental management procedures, expertise for conducting environmental assessments, risk assessment, mitigation hierarchy, conduct of meaningful public consultation, grievance redress mechanism, protected areas and biodiversity conservation, screening, and scoping.
- (iii) **Outputs and outcomes.** "Outputs" refers to the quality of assessment reports and satisfactory implementation of mitigation and monitoring. "Outcomes" refers to achievement of the PLN CSS objectives. This component encompasses eight subcomponents: content of the study report, quality of analysis, consideration of alternatives, environmental management plan, method for review of content and substance of reports submitted, arrangements for access to assessment and monitoring reports, requirements for implementation and monitoring, and environmental audit.
4. Each subcomponent was rated strong (S), moderate (M), or weak (W), according to the assessment findings.
5. The environmental assessment and approval process are established by Law no. 32/2009 on Environmental Protection and Management. Supporting regulations and decrees provide further guidance on the steps that project proponents need to take to assess the environmental implications of proposed projects, and to receive a permit to operate. Figure 1 outlines the main steps in the process.

6. According to the Minister of Environment Regulation no. 26/2018 on Guidelines for Preparation, Review and Examination of Environmental Documents in Implementation of Online Single Submissions, there are four types of instruments that project proponents may need to prepare, depending on the nature of the project and possible scale of impacts. These instruments are AMDAL, ANDAL and RKL-RPL, UKL-UPL and a commitment letter for environmental management and monitoring (*surat pernyataan kesanggupan pengelolaan dan pemantauan lingkungan hidup/SPPL*).

7. AMDAL is environmental assessment carried out for projects where there is potential for significant impact. If it is determined by the Ministry of Environment and Forestry/*Kementerian Lingkungan Hidup dan Kehutanan* (MOEF/KLHK) or a relevant District Environmental Agency that a project requires an AMDAL report, then the proponent will also need to include an RKL-RPL that indicates how impacts will be managed and/or mitigated and sets out monitoring requirements during project implementation.

Figure 1: Summary Flow Chart of the Environmental Assessment and Approval Process



KA = *Kerangka Acuan* (terms of reference)

SKKLH = *Surat Keputusan Kelayakan Lingkungan Hidup* (letter of environmental feasibility)

8. Law no. 32/2009 stipulates that an AMDAL is required for those businesses and/or activities that, among other things:

- (i) change the form and contour of the environment;
- (ii) exploit a natural resource (renewable or non-renewable);
- (iii) may cause environmental pollution and/or damage and/or degradation of natural resources;
- (iv) result in natural and artificial environmental, social and cultural impacts;
- (v) impact the sustainability of a natural resource conservation area and/or the protection of cultural heritage;
- (vi) introduce new species of plants, animals and micro-organisms;
- (vii) produce and utilize natural or non-natural raw material;
- (viii) are high risk activities and/or impact state defense; and/or
- (ix) implement new technology which is predicted to have a large impact on the environment.

9. In cases where a project requires an expansion of an existing facility, project proponents will either need to prepare a new AMDAL, or if the MOEF/KLHK does not require an AMDAL then the proponent is required to prepare an addendum ANDAL and RKL-RPL.

10. If a project is determined to have potential impacts that may turn out to be less significant, a UKL-UPL may be required for the purpose of obtaining environmental approval. A UKL-UPL has a prescribed form, which includes an activity plan, indication of environmental impact, and RKL-RPL.

11. For projects with potentially little or no impact, project proponents may be required to produce an SPPL, which is a letter stating a commitment to undertake appropriate environmental management and monitoring.

III. SUMMARY OF FINDINGS

12. **Environmental Safeguards:** Summary findings of the acceptability assessment of environmental safeguards completed for PLN are discussed below.

13. **Component A: institutional capacity** of PLN for environmental safeguards was rated either weak or moderate across all subcomponents, with several areas requiring attention. Each subcomponent is discussed in the sections that follow.

14. **Subcomponent A.1: institutional structure.**

- (i) Occupational Health, Safety, Security and Environment Division (DIVHSSE), Environmental Subdivision.

PLN's institutional structure has a number of tiers of responsibility for environmental safeguards. DIVHSSE has responsibility for all safeguards. The DIVHSSE structure following the 2018 PLN reorganization is shown in Appendix 2. The DIVHSSE environment sub-division, which is situated at PLN headquarters, comprises five further sub-divisions: Security, Occupational Health and Safety, Environmental Operational Management, Environmental Management Planning, and Climate Mitigation and Safeguards. Environmental safeguard functions are assigned to the latter two subdivisions as shown in Appendix 2. The Environmental Management Planning sub-division functions are: environmental performance

monitoring and evaluation; advising on the suitability of environmental permits for project operations; advising on implementation of UKL and RKL; advising on Indonesia's Performance Rating Program in Environmental Management (PROPER), which is a national-level public environmental reporting initiative; and implementation and evaluating implementation of natural resource and energy utilization programs. The Climate Change and Safeguard Management subdivision functions are: developing a climate change mitigation work program; advising on management of a carbon credit scheme; advising on environmental feasibility studies for foreign funded projects; advising on preparation of bidding document for foreign funded projects; advising on environmental management provisions in loan agreements; preparing terms of reference for AMDAL; advising on consultant recruitment, handling permitting and spatial planning requirements; reviewing AMDAL; and evaluating ex-post evaluation reports for foreign funded projects.

The DIVHSSE reorganization included changes intended to improve reporting to upper levels of management. Environmental staff deployed to Environmental Management Planning and Climate Change and Safeguard subunits of the UIP (*Unit Induk Pembangunan*, the PLN regional construction units for power generation and transmission) and UPP (*Unit Pelaksanaan Proyek*, the PLN project implementation units) now report to the Deputy Manager. Previously they only reported to a Supervisor. Each Deputy Manager in turn reports to the Manager of the UIP or UPP. All environmental assessment reports submitted and reviewed by UIP are now forwarded by the Deputy Managers to the Manager. The organizational structure on paper indicates that UIP and UPP Managers can report on issues and aspects to the DIVHSSE Executive Vice President. However, managers generally do not request DIVHSSE to review environmental assessment reports unless it is a UKL-UPL for a foreign funded project or a particularly complex AMDAL for a PLN-funded project.

(ii) UIP/Project Construction Unit.

Within the PLN structure, UIP are one level below the head office and are led by a Manager. UIP are responsible for construction of power generation and transmission infrastructure. The subunits are responsible for preparing terms of reference for PLN-funded AMDAL projects, for all UKL-UPL, reviewing AMDAL, addendum ANDAL and RKL-RPL, UKL-UPL prepared for PLN projects, and supervising implementation of mitigation measures and monitoring requirements during the construction phase. UIP Managers will usually request that DIVHSSE review UKL-UPL for foreign funded projects. Depending on project complexity, DIVHSSE can also provide support for reviewing and finalizing AMDAL for complex PLN funded projects. The organogram for UIP is shown in Appendix 3.

(iii) UPP/Project Implementing Unit.

UPP are one level below UIP and are led by a Manager. Under each UIP, there are typically two to three UPP, with the number varying regionally. UPP are responsible for supporting preparation of environmental assessments, and for overseeing implementation of mitigation measures and monitoring requirements. The organogram for UPP is shown in Appendix 4.

(iv) UIW/Regional offices.

UIW are PLN's operational administrative offices responsible for handling the operation of power plants and transmission systems. Their main duties are to oversee health, safety and environment during a project operational phase, including occupational health and safety issues, and to support revision of AMDAL and UKL-UPL as necessary. For foreign-funded projects that require permits or approval, DIVHSSE will assist UIP, UPP and UIW. Organization of UIW varies regionally but the general structure relating to environmental safeguards is the same as for UIP and UPP. UIW additionally have an Area Management Manager responsible for occupational health and safety, security and environment. An example organogram for UIW is shown in Appendix 5.

15. PLN has a decentralized institutional structure in place with unit(s) responsible for environmental safeguard roles and functions set up at the central and regional levels. PLN's regional units (UIP, UPP and UIW) are given the primary mandate to address environmental safeguard issues for PLN-funded project AMDAL and the majority of UKL-UPL projects. The functionality of the current structure has limitations, such as technical supervision and oversight at the UIP and UPP. While three tiers of environment staff are shown in the in the organogram at these levels, only one environment staff is hired at most UIP and UPP. After the 2018 restructuring, reporting lines and supervisory responsibilities are now better defined. It is recommended that oversight and quality control/quality assurance functions be further refined by filling in the vacant environmental engineer positions at all tiers to bolster environmental safeguard performance at the UIP and UPP levels.

16. **Subcomponent A.2: budget.** PLN headquarters maintains the corporate master budget, which includes the budgets for the DIVHSSE Environment Subdivision, UIP, UPP, and UIW, and allocates funds for environmental management and monitoring activities at all levels. PLN's overall environmental budget for the 2017 fiscal year was approximately \$10 million. This budget is intended to fund preparation of AMDAL, addendum ANDAL and RKL-RPL; as well as UKL-UPL preparation, implementation and monitoring in addition to other PLN environmental responsibilities such as reforestation around power plants. The 2017 fiscal year budget of approximately \$5 million, excluding staff salaries and the cost of preparing environmental assessments, was allocated as follows: safety and occupational health, 27%; security, 57%; and environment, 16%. Environment included broad activities in the areas of capacity building for creating awareness, advocacy, networking, knowledge dissemination, and fulfilment of donor requirements, among other activities. The DIVHSSE Environment Subdivision and each UIP, UPP and UIW prepare detailed annual work plans and funding requirements for AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL preparation and implementation based on their anticipated workload for the following year and the different programs to be implemented.

17. DIVHSSE, UIP, UPP and UIW budgets are determined based on annual workloads, but it is not possible to assess whether the budget allocations are sufficient to ensure satisfactory performance and provide adequate expenditures on consultants preparing environmental assessments and project implementation monitoring activities.

18. **Subcomponent A.3: staffing.** Annual staffing reviews are undertaken by PLN based on anticipated workloads communicated by the DIVHSSE sub-division, UIP, and UPP, and UIW. On this basis, PLN prepares an indicative staffing projection plan. Staffing levels at the DIVHSSE subdivision are considered sufficient to meet current responsibilities but additional staff will likely be needed for the subdivision to carry out their new mandate. PLN recognizes that current staffing

levels at UIP and UPP may be insufficient for environment staff to review consultant assessment reports and to monitor project implementation. In response, PLN is committed to hiring additional graduate and post-graduate personnel with qualifications in environmental fields. All environment staff in DIVHSSE, UIP, UPP and UIW are required to meet minimum qualifications as specified in the Competence Directory issued by PLN headquarters. This directory provides that staff must at least be qualified in environmental safeguards and environmental auditing. The directory does not specify the qualifications required for safety, occupational health and environment supervisors at the UIW level.

19. Staffing levels at the DIVHSSE environment sub-division are considered moderately satisfactory for handling current responsibilities but may be insufficient to meet future demands. Staffing of UIP and UPP is considered partly satisfactory for meeting current needs. It is recommended that DIVHSSE closely track staffing levels and make upwards adjustments as necessary.

20. **Subcomponent A.4: knowledge management.** PLN has a dedicated Knowledge Management Unit which is responsible for ensuring strategic policy, knowledge management programming, and competence development. The unit's main duties are to prepare, implement, and evaluate PLN's knowledge management policy, share innovation and knowledge across the company, and build staff capacity and competencies. At present, this is more focused on engineering and technical matters. PLN has established a knowledge management portal to facilitate and accelerate sharing of knowledge, expertise, and experience among staff. Staff regularly use the portal to download data and information and share professional experiences. The knowledge management systems provide for knowledge-sharing through dissemination of good practice across the company. System content is progressively being expanded beyond engineering and technical themes but can be improved by adding more emphasis on environmental safeguards.

21. **Subcomponent A.5: technical expertise.** PLN's in-house environmental safeguard capacity was determined to be variable across the DIVHSSE organizational levels. Capacity at the DIVHSSE environment subdivision is considered moderate for guiding consultants, reviewing AMDAL prepared for foreign-funded projects, and supporting UIP in reviewing AMDAL and UKL-UPL. In contrast, UIP and UPP's capacity was assessed as weak, based on their observed performance in variously overseeing consultants in the preparation of assessment reports prepared for PLN projects, critically reviewing reports submitted by consultants, and methodical project implementation and monitoring. Newly hired PLN environmental safeguard staff do not always have the opportunity to attend introductory AMDAL and UKL-UPL courses prior to commencing work. Existing staff are required to take at least one environment-related course annually. After completing the basic AMDAL and UKL-UPL courses, UIP and UPP staff should have sufficient knowledge to perform satisfactorily. However, completion of additional courses in AMDAL and UKL-UPL review and impact identification and risk analysis, and specialized courses such as biodiversity assessment, would be necessary to ensure a high level of competence. No conclusions can be reached on environmental safeguard staff technical competence since DIVHSSE lacks an evaluation system and annual staff performance reviews. Instead, the focus is on the number of environmental documents prepared, conduct of environmental compliance monitoring, and disbursement of the environmental budget.

22. Environmental assessments are outsourced to external consultants. DIVHSSE environment subdivision staff are responsible for preparing terms of reference for all foreign funded projects, and for reviewing AMDAL and addendum ANDAL and RKL-RPL for such loan projects. UIP environment staff are responsible for preparing terms of reference and reviewing

AMDAL, UKL-UPL, and addendum ANDAL and RKL-RPL for PLN-funded projects. PLN recruits consultants through its Engineering Procurement Planning Unit. PLN does not maintain a pool of experts and recruits consultants on an as-needed basis. PLN has memoranda of understanding with public and private universities and independent research centers to provide external expertise in many areas related to environmental assessment, waste management, environmental monitoring, and permit management. Consultant performance and quality assurance and quality control are not routinely conducted.

23. It is recommended that DIVHSSE review environmental staff competency and refine their capacity development master plan to address identified gaps. Additionally, DIVHSSE should institute a consultant evaluation system to assess the quality of consultant outputs.

24. **Subcomponent A.6: legal counsel.** PLN has a corporate law division responsible for ensuring company compliance with national regulations and PLN procedures, including environmental safeguards. No information was available regarding environmental law qualifications of legal division staff and whether they are involved in ensuring that PLN satisfies its regulatory requirements for environmental assessment (e.g., the legal division's involvement in project screening). The unit also supports compliance with regulations and corporate business codes related to environmental safeguards and compliance with good corporate governance principles. The division is additionally involved in settling pollution related disputes.

25. **Subcomponent A.7: supporting equipment and facilities.** PLN power plants are properly equipped to measure emissions, noise, electromagnetic force and water quality. As necessary, PLN makes use of external analytical laboratories, which under national regulations are required to be certified. The lack of mobile monitoring equipment at regional PLN offices may limit UPP's role in spot-checking on project compliance and in responding to pollution complaints. Coal power plants that use coal with sulfur contents higher than 20% are required by regulation to install continuous emission monitoring systems to ensure that air quality standards are met. Consultants and experts preparing environmental assessments are also required to use certified laboratories and confirm in assessment reports that this requirement was met. Review of sample PLN environmental assessment reports indicated that such confirmations are often not provided. PLN's in-house capacity to conduct spot monitoring outside of power plants would be enhanced through equipping UIP, UIP, and UIW with mobile monitoring equipment.

26. **Subcomponent A.8: capacity building program.** PLN has a Capacity Development Master Plan which includes environmental safeguard training at basic, intermediate and advanced levels. Capacity building is conducted both at the PLN Corporate University and by external training providers. PLN's Corporate University comprises ten separate academies located in Jakarta and regionally, which deliver in-house capacity-building for PLN staff. Training includes the following topics: environmental protection and management, environmental audit, environmental pollution performance rating, and safety. Environmental safeguard staff are required to complete introductory courses on AMDAL and UKL-UPL preparation. Staff are required to take at least one additional course each year. DIVHSSE provides additional capacity building through special workshops and information dissemination on environmental management for staff working at UIP, UPP and UIW levels. While only a few of the courses being offered are directly relevant to environmental safeguards, PLN has indicated that their HSSE Academy is progressively offering a wider range of courses on environmental topics, including specialized subjects such as International Organization for Standardization (ISO) 14001 on environmental management systems, safeguard capacity level for RBL, and beyond-compliance environmental performance. PLN relies on external training providers to develop and deliver some courses, particularly courses requiring certification. PLN has established cooperation with several

prominent universities to provide training on AMDAL and other environmental topics such as hazardous substances and hazardous waste management; and UKL-UPL and RKL-RPL monitoring, implementation and evaluation.

27. While PLN has a moderately satisfactory capacity building program, the program should be further strengthened through offering intermediate and advanced courses on specialized topics such as impact identification and risk analysis, and biodiversity impact assessment. Additionally, attention should be given to expediting training delivery so as to ensure that environmental safeguard staff successfully complete basic, intermediate and advanced courses as part of their professional progression within the company.

28. **Subcomponent A.9: supervision and monitoring responsibility.** UIP and UPP environment staff supervise and oversee each project, which includes ensuring that contractors comply with the provisions set out in UKL-UPL, RKL-RPL, and contracts. Conditions related to environmental safeguards are stipulated when a tender is issued, and obligations related to environmental safeguards are included in all contracts with contractors. Environmental supervision as prescribed in UKL-UPL and RKL-RPL begins once project construction commences and continues during project operations. UIP are responsible for preparing semi-annual monitoring reports for submission to MOEF/KLHK. Monitoring of UKL-UPL and RKL-RPL implementation involves checking specified inspection parameters. Monitoring reports document trends, critical parameters, and compliance. When monitoring results indicate non-compliance, the monitoring report specifies corrective actions which contractors must implement under the supervision of UIP and UPP environment staff.

29. PLN's overall performance in environmental supervision of projects involving implementation monitoring and preparation of semi-annual reports is considered partly satisfactory. There are indications of sometimes chronic delays in the submission of semi-annual reports and uneven quality of reports submitted.

30. Review of DIVHSSE's monitoring and supervision practices revealed that UPP staff capacity and capability to conduct site visits and closely monitor project implementation was weak. This limitation is compounded by the observed variable quality of UKL-UPL and RKL-RPL, including often unclear mitigation measures and monitoring requirements. Semi-annual monitoring reports were found to be of differing quality and often not submitted to MOEF/KLHK in a timely manner. Systematic follow-up on corrective actions and non-compliance issues is also lacking.

31. **Component B: processes and procedures** applied by PLN in implementation of environmental safeguards was rated either weak or moderate across all subcomponents, with several areas requiring attention. Each subcomponent is discussed in the sections that follow.

32. **Subcomponent B.1: compliance with national and PLN regulations and procedures** Assessments undertaken on PLN projects cite the relevant regulations and specific requirements applicable to different project assessment types (i.e., AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL). In order to ensure compliance with both regulatory and procedural requirements, all AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL are evaluated either by the DIVHSSE sub-division or UIP, depending on whether projects are foreign- or PLN-funded. Assessment reports which are reviewed as satisfactory are then submitted to MOEF/KLHK for their review and approval.

33. **Subcomponent B.2: targets to assess PLN environmental performance.** Clear environmental performance targets have been set by DIVHSSE, which has prepared a roadmap for the period 2018–2021 describing progressively higher annual targets and explaining planned actions to achieve these targets. DIVHSSE's environment subdivision has eight categories of targets for corporate performance in 2018, including increasing the percentage of AMDAL meeting Indonesia's quality targets and improving PLN project performance as measured by the PROPER rating system. DIVHSSE's targets for AMDAL quality are exceeding 50% in 2018 and increasing to 75% by 2019.

34. DIVHSSE recognizes that the AMDAL quality targets are modest but they expect that performance will progressively improve. It is doubtful, however, whether the targets are sufficiently challenging and are likely to be achieved, raising concerns regarding the overall quality of assessments being prepared for PLN projects. Lacking comparable targets for UKL-UPL, it is not possible to monitor performance of this type of project, which represents the majority of projects being developed by PLN.

35. **Subcomponent B.3: coordination with other bodies responsible for permits and approvals.** PLN has clear procedures for consultation and coordination with other bodies, including obtaining environmental permits from MOEF/KLHK and its provincial and district offices, and other spatial planning approvals. DIVHSSE is responsible for obtaining all permits and approvals. Given the large number of projects underway at any time, the division relies on an ISO-based integrated management system for document management and control.

36. While DIVHSSE has clear procedures for consultation and coordination with other bodies, a review of sample PLN AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL indicated that the process and timeliness could be improved.

37. **Subcomponent B.4: incorporation of pollution control and hazardous waste handling into environmental management procedures.**

- (i) Pollution control and mitigation measures are set out in UKL-UPL and RKL-RPL prepared for PLN projects. PLN promotes the adoption of clean technology as part of its pollution prevention efforts, including use of low nitrogen oxide burners to control and reduce nitrogen oxide emissions during operation, electrostatic precipitators to contain fly ash, and enclosure systems for noise control. PLN projects conduct quarterly emission monitoring and reporting on emissions loads through a continuous emission monitoring system. Similar monitoring and reporting are also carried out for emissions from mobile sources, and for wastewater discharges.
- (ii) PLN follows a national regulation for hazardous and toxic waste management and applies a PLN standard operating procedure for hazardous waste management. The procedure covers identification, collection, containment and storage, and transport of hazardous and non-hazardous wastes. In addition to waste management, PLN uses non-polluting technology, including a phase-out of polychlorinated biphenyl use for new installations since 1998. Environmental assessments undertaken for PLN projects involving hazardous wastes mostly describe the process of obtaining permits for collection and transport of hazardous wastes and maintaining hazardous waste reporting sheets. Reflecting the lack of hazardous waste disposal facilities in Indonesia, PLN projects must contend with long term storage and ongoing problems of spillages and leakage.

38. Pollution control and mitigation measures and monitoring requirements, while routinely included in UKL-UPL and RKL-RPL, may not include all potential impacts and/or be sufficiently detailed. While PLN projects generally comply with requirements relating to emissions control equipment and other pollution control measures, UPP often lack mobile monitoring equipment necessary to conduct spot monitoring. There are documented instances of PLN projects not fully complying with the applicable and standard operating procedures for hazardous and toxic waste management. PLN projects generally have to store hazardous materials for extended periods in inadequate and uncontrolled conditions. While moderate progress is being made in addressing hazardous waste storage issues for ADB-funded projects, PLN can improve performance on their internally funded projects.

39. **Subcomponent B.5: expertise in conducting environmental assessments.** In Indonesia, project proponents are responsible for preparing AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL. These assessments can be prepared directly by project proponents or by certified consultants from the private sector and experts from universities. The present capacity of the DIVHSSE subdivision and UIP to prepare environmental assessments was found to be weak, as evidenced by the continual heavy reliance on external consultants to prepare AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL for both PLN- and foreign-funded projects. The capacity and competence of external consultants is recognized as being variable, particularly in outlying regions where the availability of qualified consultants is comparatively less. Expertise requirements for experts and consultants are minimal (e.g., environment-related degree and three to five years' experience).

40. Lacking a consultant evaluation system, DIVHSSE is unable to methodically assess the quality of assessments being prepared, although there are clear indications that environmental assessment reports are of widely varying quality. Since the capacity of external consultants and their output varies, there is a need to streamline the process by which assessments are undertaken, and consultant selection needs to be systemized.

41. **Subcomponent B.6: risk assessment.** As a part of its internal supervision and control system, PLN has established a risk management policy. PLN has also created a Risk Management Division which is responsible for ensuring that risks are managed in a correct, continuous, and comprehensive manner, and that all identified risks are satisfactorily addressed. This commitment includes rigorous application of environmental safeguard instruments. In practice, conduct of impact identification and risk analysis as part of AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL preparation was found to be partly satisfactory. It is generally apparent that some environmental impacts are overlooked, and risks are underemphasized in assessment reports. The limited capacity of UIP environment staff to review this section of reports likely contributes to the acceptance of reports containing weak impact identification and risk analysis.

42. DIVHSSE should give attention to improving impact identification and risk analysis so as to improve the overall quality of environmental assessment reports. This may be done through incorporating capacity development actions on this topic into the capacity building master plan. This subcomponent is rated as weak.

43. **Subcomponent B.7: mitigation hierarchy.** Application of the mitigation hierarchy in assessment of PLN projects was found to be satisfactory in determining the sites for projects. At the project feasibility study stage, siting of power plants is planned to avoid ecologically sensitive

areas to the extent possible. Similarly, during the assessment screening stage, actions are identified to avoid, minimize or mitigate impacts wherever feasible. There are indications that avoidance of impacts is not uniformly attempted as evidenced by PLN project activities located either directly adjacent to or inside protected and key biodiversity areas. Lack of understanding of the magnitude and severity of potential impacts to ecologically sensitive areas may result in identifying ineffective avoidance and mitigation measures and overlooking opportunities for biodiversity offsetting.

44. While the mitigation hierarchy is generally applied, environmental safeguard staff capacity to identify potential impacts to natural and critical habitat, to assess the nature of impacts, and to identify appropriate mitigation and restoration and/or offsetting measures should be improved. The capacity development masterplan may be updated to introduce training on application of the mitigation hierarchy during AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL preparation and implementation.

45. **Subcomponent B.8: conduct of meaningful public consultation.** PLN's information disclosure and public consultation procedures during the environmental assessment process were found to be partly satisfactory, based on their effectiveness, comprehensiveness, and inclusiveness. In the initial announcement and public consultation stage of the AMDAL process, PLN makes public announcements through local newspapers, radio and television broadcasts, and by postings at government offices, inviting the public to respond and submit suggestions, opinions, responses, or objections to a project. While information disclosure and public consultation requirements are quite limited for addendum ANDAL and RKL-RPL, and UKL-UPL, most assessments do make an effort to inform and engage with potentially affected persons. Potentially affected persons, community leaders, family welfare organizations, and local non-governmental organizations typically participate in public consultations. Typically, only limited information is made available regarding potential adverse environmental impacts of planned projects, with project details being provided verbally during the actual consultation. Consultations are generally well documented with all suggestions, opinions, and responses being recorded, and then checked and verified by PLN. Depending on the significance and validity of the issues raised, public participation may lead to revisions to AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL. Although assessment reports generally do describe the public consultation process, they often do not summarize how the project has responded to feedback provided, including any changes to project design and location.

46. Identified equivalence gaps relating to the lack of uniform information disclosure and public consultation requirements across all project types reduces the meaningfulness, and usefulness to the project, of public consultations. These gaps will be addressed in the environmental equivalence action items. While PLN generally complies with public consultation requirements, PLN may introduce a module on meaningful public consultations into the capacity building master plan for application in AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL preparation and project implementation.

47. **Subcomponent B.9: grievance redress mechanism.** PLN responds to grievances received through its existing complaint resolution process. Complaints arising during a project's construction phase and received directly by PLN are handled by the UIP Public Relations/Communication Department, which verifies and forwards the complaint to the responsible unit with authority to respond. PLN additionally notifies MOEF/KLHK of any complaints received for its follow-up. Grievances raised through customary community processes are forwarded by village leaders and/or customary leaders to the local PLN office. Complaints received by MOEF/KLHK offices are verified and then forwarded to PLN for resolution. When a

PLN office receives a notification or warning from MOEF/KLHK or one of its regional offices, the corresponding regional office is required to act immediately. The MOEF/KLHK grievance redress mechanism has a procedure requiring local authorities to document that the complaint was identified, noted, managed and resolved. PLN also has a complaint management system accessible through the PLN Call Center 123, online by using an integrated complaint-solving application, and at local customer service offices. This system allows affected persons to report any incident or complaint about PLN operations.

48. PLN's grievance receipt and resolution process are found to be moderately satisfactory based on adherence to its existing complaint-handling mechanisms and crosschecks to ensure that complaints are resolved. The process can be improved by enhancing capacity in best practices in grievance handling and redress at the project level. A module on the grievance redress mechanism may be introduced into the capacity building master plan for application in AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL preparation and project implementation.

49. **Subcomponent B.10: protected areas and biodiversity conservation.** PLN's adherence to the procedures applicable to protected areas and biodiversity conservation were found to be partly satisfactory, with projects having to comply with both spatial planning and permitting requirements, including those applicable to moratorium and forested areas, and protected areas. Preventing or avoiding impacts on ecologically sensitive areas is anticipated at the screening stage of project preparation when the MOEF/KLHK and its regional offices must evaluate compliance of the project location with the corresponding spatial plan. Project locations must also comply with the indicative map of the new permit moratorium. Although no business and/or activity is allowed in a moratorium area or protected area, except for special cases with very strict requirements, instances were identified where substation and transmission line construction work occurred immediately adjacent to or within protected and/or key biodiversity areas. AMDAL prepared for foreign-funded and PLN projects which pose potential biodiversity impacts generally provide sufficiently detailed baseline information on which to assess impacts to terrestrial and aquatic habitats. More limited baseline information is required for addendum ANDAL and RKL-RPL, and UKL-UPL, with the consequence that potential impacts may not be properly understood. Impact identification and risk analysis is typically less rigorous, and as a result can overlook or incorrectly characterize potential impacts to natural and critical habitat. Preparation of biodiversity impact assessment is seldom undertaken for PLN projects.

50. While efforts are made to identify potential biodiversity impacts of PLN projects in accordance with applicable regulations and procedures, the process may suffer due to lack of PLN environmental safeguard staff and consultant capacity to conduct impact identification and risk analysis. Consequently, mitigation sections of assessment reports may lack rigor, overlooking potential impacts and inadequately assessing the impacts to critical habitats and biodiversity. Capacity can be enhanced at all levels in the screening and assessment of impacts on terrestrial and marine habitats, including unprotected and protected forests, mangroves, seagrass and corals by updating the capacity building master plan in this area.

51. **Subcomponent B.11: screening.** Screening is routinely undertaken for PLN projects, in consultation with MOEF/KLHK regional offices, to determine the type of environmental assessment necessary. Consideration is also given to spatial plans, permitting requirements, development moratoriums, and designated protected areas. Screening of PLN projects is considered partly satisfactory, with projects being screened according to regulatory requirements. An omission identified in the screening requirements is that electricity distribution lines are not subject to assessment unless they pass through protected areas or are part of a larger integrated

project which includes distribution lines. It was additionally identified that project screening does not consistently conform to regulatory requirements, with some PLN projects occurring immediately adjacent to or within protected areas being screened as UKL-UPL rather than AMDAL. PLN should revise its screening procedure to ensure that impacts of electricity distribution lines, including lines passing through protected areas, are dealt with in environmental assessments. This is being addressed through the equivalence assessment process and has not been identified as a gap in acceptability, as the process and procedure as it currently exists is being followed. The project screening process should also be strengthened to ensure that projects are correctly screened based on an accurate description of projects activities and locations.

52. **Subcomponent B.12: scoping.** The PLN scoping procedure was found to be partly satisfactory, being generally consistent with assessment good practice. PLN projects requiring an AMDAL routinely undertake scoping to comply with regulatory requirements. Scoping is not applicable to UKL-UPL projects. Addendum ANDAL projects are subject to internal peer review by PLN to ensure the thoroughness of an assessment.

53. PLN is not required to undertake scoping for larger UKL-UPL projects which may cause significant impacts similar to AMDAL projects and for addendum ANDAL which often involve large project expansions. Although scoping is not required for UKL-UPL and addendum ANDAL projects, a scoping exercise is still needed to establish the assessment coverage. This acceptability gap can be addressed through revision of PLN procedures to include a scoping process for both UKL-UPL and addendum ANDAL projects.

54. **Component C: outputs and outcomes** achieved by PLN in terms of the quality of safeguard assessment reports, satisfactory implementation of mitigation and monitoring, and achievement of the legal framework's objectives were rated as weak across most subcomponents. The individual subcomponents are discussed in detail below.

55. **Subcomponent C.1: content of the study report.** AMDAL prepared for PLN-funded projects were found to be partly satisfactory, with topics such as scoping; baseline analysis; impact identification and risk analysis; analysis of alternatives; cumulative, indirect and induced impacts; and pollution prevention often not being covered. AMDAL prepared for foreign-funded projects are generally satisfactory, providing more comprehensive content on all topics. UKL-UPL typically have less content, reflecting the lack of an explicit requirement to cover some topics. Addendum ANDAL and RKL-RPL similarly have less content than an AMDAL. There is significant room for improvement in making PLN's environmental assessments consistent with good industry practice. The overall quality of environmental assessment reports, include the completeness of report content, is of concern. AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL submitted to DIVHSSE and UIP are often subject to extensive revisions before eventually being rejected or approved. It is not unusual for assessment reports to be repeatedly submitted to MOEF/KLHK for their approval.

56. It is recommended that the HSSE Academy's environmental safeguard curriculum and environment staff capacity be strengthened, including for the review of AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL as part of the capacity development action plan. Particular attention should be given to ensuring that all necessary topics are covered, such as baseline description, impact identification and risk analysis, and application of the mitigation hierarchy in identifying appropriate avoidance, minimization, mitigation and restoration/offset measures.

57. **Subcomponent C.2: quality of analysis.** The quality of impact identification and risk analysis in AMDAL, addendum ANDAL, and UKL-UPL prepared for foreign-funded projects was

found to be satisfactory, while AMDAL prepared for PLN projects was partly satisfactory. Quantitative and qualitative methods are routinely used in preparing AMDAL and addendum ANDAL, while more simplified methods are used in UKL-UPL. Despite the application of a comprehensive impact identification and risk analysis methodology in AMDAL and addendum ANDAL, some impacts may go unnoticed or not be fully particularized, possibly due to incomplete or inadequately detailed baseline information. Because UKL-UPL projects are not expected to cause significant adverse impacts, less attention is given to impact identification. Additionally, the combination of no requirement to assemble baseline data and a more rudimentary impact identification and assessment methodology may result in impacts being overlooked and the magnitude of impacts underestimated. This is of particular concern given the range of UKL-UPL projects, including larger projects which are not screening as AMDAL projects, but which could potentially cause significant environmental impacts.

58. It is recommended that the HSSE Academy's environmental safeguard curriculum and environment staff capacity be strengthened with respect to AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL preparation and review. Corresponding updates are needed in the DIVHSSE capacity building master plan.

59. **Subcomponent C.3: consideration of alternatives.** Analysis of alternatives in AMDAL prepared for foreign- and PLN-funded projects was found to be partly satisfactory based on the narrow range of alternatives typically considered or explained in environmental assessment reports. PLN assesses alternatives on the basis of both non-financial and financial criteria, with a key non-financial consideration being a project's environmental acceptability. The financial criteria in turn are used to assess which alternatives are feasible and cost-effective. The analysis of alternatives as described in most AMDAL is overly narrow, typically considering production capacity, location of project components, production technology, building layout, and timing and duration of operations. Alternative locations are particularly considered in the siting of new power plants, and the siting of transmission towers and alignment of transmission lines to avoid impacts on socially and/or environmentally sensitive areas. Consideration of the "no project" alternative is uncommon. There is no regulatory requirement for assessment of alternatives of any kind for UKL-UPL, but there is a requirement that during project screening local government authorities shall determine whether technology is available to mitigate any potential impacts. Analysis of alternatives in addendum ANDAL is not explicitly required given the fixed location of existing projects. However, new technologies are normally considered, given that project expansions will seek to adopt newer technologies compared to the existing power plant.

60. This lack of detail is covered as part of the equivalence assessment where a more robust analysis of alternatives is recommended. PLN undertakes alternatives analysis according to national requirements. The capacity development master plan should be updated to include increase environmental safeguard staff proficiency in alternatives assessment.

61. **Subcomponent C.4: environmental management and monitoring plan.** RKL-RPL and UKL-UPL prepared for PLN projects were found to be partly satisfactory. While the plans generally adhere to the required format and cover standard topics, mitigation measures and monitoring requirements applicable during construction and operation phases are often not sufficiently described (e.g., intent of planned mitigations, monitoring program design, implementation responsibilities, budget allocations), with the reports providing standard content. Mitigation measures and monitoring requirements may not be sufficiently described (e.g., intent of planned mitigations, monitoring program design, implementation responsibilities, and budget allocations). There is no regulatory requirement for UKL-UPL to provide mitigation measures that reduce potential adverse impacts to a level of no significant harm. Greater clarity is needed on program

monitoring requirements, including specifying respective responsibilities for implementation of mitigation measures and conduct of monitoring, and plainly stating fund allocation for mitigation and monitoring. Performance review of representative ADB-funded projects indicated partly satisfactory implementation of mitigation measures and mentoring programs (e.g., construction not being to design specifications, slow progress in improving hazardous waste handling and storage), however, comparatively, for PLN funded projects performance was not of the same level.

62. DIVHSSE environmental safeguard staff capability should be enhanced by updating the capacity development master plan to include training on UKL-UPL and RKL-RPL preparation, and on ongoing evaluation of implementation performance.

63. **Subcomponent C.5: method for review of content and substance of reports submitted.** PLN's procedure for and conduct of assessment document review was found to be partly satisfactory. While routinely covering regulatory, administrative and technical content, inconsistency is apparent in the review process. PLN environment staff at the DIVHSSE environmental subdivision review AMDAL for foreign-funded projects while UIP-level staff review addendum ANDAL and RKL-RPL for PLN-funded projects. UIP review all UKL-UPL, receiving guidance from DIVHSSE on foreign-funded projects. PLN's internal review focuses primarily on regulatory and administrative compliance but also considers technical issues and may include making recommendations on changes to project siting and design. Following PLN's review of project assessment reports, they are forwarded to MOEF/KLHK for approval. Although MOEF/KLHK has developed a checklist for reviewing AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL, their review tends to be ad hoc, with reviewers instead relying on their own knowledge and expertise.

64. It is recommended that the capability of PLN environmental safeguard staff to review environmental assessment documents be improved by updating the capacity development master plan to include trainings in critical review of AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL.

65. **Subcomponent C.6: arrangements for access to assessment and monitoring reports.** Disclosure of assessment and implementation monitoring reports either by MOEF/KLHK or PLN was found to be partly satisfactory. Limited access to such reports affects the transparency of the assessment process, but this is not a national regulatory requirement. MOEF/KLHK and its regional offices are responsible for disclosure of approved AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL. Some assessment and monitoring reports for PLN projects can be found on the MOEF/KLHK website and are available for access upon request. PLN makes selected reports available on its company website. Implementation monitoring reports do not, however, appear to be made publicly available. The PLN project proponent must instead submit semi-annual monitoring reports to MOEF/KLHK and its regional offices which may then disclose the reports. Public disclosure of PLN's operational environmental performance rating is done through Indonesia's PROPER. The identified gap in information disclosure requirements is being addressed through the equivalence assessment.

66. **Subcomponent C.7: requirements for implementation and monitoring.** As a project proponent, PLN is responsible for monitoring UKL-UPL and RKL-RPL implementation on a semi-annual basis. MOEF/KLHK and its regional offices are responsible for supervising such monitoring. PLN's performance with regard to implementation and monitoring was found to be partly satisfactory. Submission of monitoring reports is not uniformly timely, with some projects being chronically late in submitting reports. Monitoring parameters typically include time series

data on air and water quality and noise, comparison of physio-chemical monitoring data with permitted levels, and identification of non-compliance for any monitoring parameter. While projects are generally in compliance with permitted levels, monitoring data is often poorly presented and explained. Not all reports included the required confirmation that analyses were carried out by a laboratory accredited by the Indonesia National Accreditation Committee. Similarly, monitoring reports often do not specify necessary corrective actions. Generally, greater clarity is needed on project track records in completing agreed corrective actions and in the handling by PLN of non-compliance issues.

67. It is recommended to increase PLN funding and environment safeguard staffing levels to ensure sufficient budget is available for regular implementation monitoring and capacity to prepare and submit monitoring reports in a timely manner. The capacity development master plan should be updated to include training in project implementation monitoring and reporting.

68. **Subcomponent C.8: environmental audit.** Although conduct of environmental audits in stipulated circumstances (e.g., high risk projects or activities) is a regulatory requirement, such audits are seldom considered necessary. Instead, as part of PLN's integrated management system, UIW conduct regular audits of power plant operations. Limited information was available from PLN for purposes of this assessment regarding the adequacy of audit procedures and follow-up actions taken.

69. It is recommended that existing environmental audit training in the capacity development master plan be reviewed and updated to ensure comprehensiveness, and that course completion be mandatory for PLN environmental safeguard staff to ensure core capability in the conduct of rigorous environmental audits in response to project violations and consistent non-compliance with regulatory requirements.

70. Based on the acceptability assessment findings, proposed gap-filling measures have been incorporated into the following action plan.

IV. ENVIRONMENTAL SAFEGUARD ACCEPTABILITY ASSESSMENT ACTION PLAN

71. The following environmental safeguard acceptability assessment action plan takes into account gaps that are being addressed through the action plan for the environmental safeguard equivalence assessment and gaps identified in conduct of this acceptability assessment. Recommended gap-filling actions provided in Table 1 constitute the environmental safeguard acceptability action plan for PLN.

72. Table 2 presents the detailed findings of the PLN environmental safeguard acceptability assessment and corresponding recommendations that are reflected in the Environmental Safeguard Acceptability Assessment Action Plan in Table 1.

Table 1: Environmental Acceptability Assessment Action Plan

No.	Component/ Subcomponent	Gaps	Actions
1.	<p>Institutional Capacity:</p> <ul style="list-style-type: none"> • Institutional structure • Staffing • Budget • Supporting equipment and facilities 	<p>Institutional structure: PLN organizational structure for environmental safeguards while appropriately staffed lacks technical oversight responsibility and reporting at the UIP, UPP levels.</p> <p>Staffing: staff with specialized knowledge needed at DIVHSSE, UIP and UPP levels, and senior technical safeguard focal persons.</p> <p>Budget: Current allocation needs to be revised to address environmental assessment preparation and review, and project implementation monitoring.</p> <p>Supporting equipment and facilities: PLN needs to supplement in-house capacity in mobile meters for spot emissions (both air and effluent) measurement during project construction and operations.</p>	<p>Institutional structure and staffing: Appoint senior technical safeguard focal persons to review safeguard documents and oversee implementation of monitoring reports at the UIP, UPP levels for ADB projects. Fill designated environmental safeguard staff positions as indicated in the PLN Regulation 38 Appendix II at the UIP and UPP levels.</p> <p>Budget committed for AMDAL, addendum AMDAL, and UKL-UPL and RKL-RPL preparation and implementation.</p> <p>Supporting equipment and facilities: For the development of ADB financed power generation projects, procure mobile meters for emissions measurement and monitoring. Enhance PLN staff capacity in the use of this equipment.</p>
2.	<p>Process and Procedure; and Outputs and Outcomes:</p> <ul style="list-style-type: none"> • Institutional knowledge management • Capacity building program • Technical expertise • Expertise for conducting environmental assessments • Quality of assessment documents. 	<p>Institutional Knowledge Management: Strong in aspects of engineering and design, but requires more focus on environmental safeguards, including specialized technical topics</p> <p>Capacity Building Program: Capacity development master plan needs strengthening to ensure timely progression through basic, intermediate and advanced courses, and delivery of training on specialized technical topics.</p> <p>Technical capacity: Environmental assessment reports (AMDAL, ANDAL, UJKL-UPL) reports</p>	<p>Supplement and implement the Capacity development master plan to include more focused trainings and supplementary content on specialized topics.</p> <p>New topics to be added to the training and supplementary material are: biodiversity impact assessment, monitoring and review, hazardous waste pollution control and handling, impact identification and risk analysis, meaningful public consultation as a good practice, gender impacts and</p>

No.	Component/ Subcomponent	Gaps	Actions
		<p>prepared by consultants are of varying quality, PLN environmental safeguard staff in the UIP/UPP levels have limited technical skills to supervise consultants and critically review assessment reports submitted and to effectively oversee project implementation.</p> <p>Expertise for conducting and reviewing environmental assessment: Structure and strengthen the environmental assessment process through improved consultant management and improved environmental safeguard staff capacity and capability</p>	<p>women in the AMDAL, addendum ANDAL and UKL-UPL processes, project-level grievance redress, analysis of project alternatives in the AMDAL, addendum ANDAL and UKL-UPL processes, RKL-RPK preparation and review, occupational and community health and safety, international standards on pollution prevention (i.e., World Bank Environmental, Health, and Safety Guidelines), and environmental audit, air pollution management, and noise control and modeling.</p>

Table 2: PLN Environmental Safeguard Acceptability Assessment Findings and Recommendations

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
A.	Institutional Capacity			
A.1	Institutional structure	M	<p>PLN has a decentralized institutional structure in place with unit(s) responsible for environmental safeguard roles and functions set up at the central and regional levels. PLN's regional units (UIP, UPP and UIW) are given the primary mandate to address environmental safeguard issues for PLN funded AMDAL projects and the majority of UKL-UPL projects. Although reporting lines and supervisory responsibilities are now better defined, they still are considered unlikely to provide for sufficient quality control of environmental assessments being handled at the UIP, UPP and UIW levels. Decentralizing review and approval of PLN funded AMDAL, and UKL-UPL to the UIP level without a required quality control role at headquarters may not be conducive to strong overall environmental safeguard performance.</p> <p>Occupational Health, Safety, Security and Environment Division (DIVHSSE), Environmental Subdivision</p> <p>PLN's institutional structure has a number of tiers of responsibility for environmental safeguard with DIVHSSE being responsible for safeguards. The DIVHSSE structure following the 2018 PLN reorganization is shown in Appendix 2. The DIVHSSE environment sub-division which is situated at PLN headquarters comprises five further sub-divisions: 1) Security sub-division; 2) Occupational Health and safety sub-division; 3) Environmental Operational Management sub-division; 4) Environmental Management Planning sub-division; and 5) Climate Mitigation and Safeguard sub-division. Environmental safeguard functions being assigned to the latter two sub-divisions also shown in Appendix 2. The Environmental Management Planning sub-division functions</p>	<p>DIVHSSE should revise internal communication processes between DIVHSSE, UIP, and UPP. Put in place an additional review process at the UIP and UPP levels whereby senior environmental (i.e., technical rather than management) are responsible for review of assessment and project implementation monitoring reports and overall quality assurance and quality control.</p>

¹ The rating uses three categories: S (strong), M (medium), W (weak).

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>are environmental performance monitoring and evaluation; advising on the suitability of environmental permits for project operations; advising on implementation of UKL and RKL; advising on Indonesia's Performance Rating Program in Environmental Management (PROPER), which is a national-level public environmental reporting initiative, implementation; and evaluating implementation of natural resource and energy utilization programs. The Climate Change and Safeguard Management sub-division functions are: developing a climate change mitigation work program; advising on management of a carbon credit scheme; advising on environmental feasibility studies for foreign funded projects; advising on preparation of documentary bidding for foreign funded projects; advising on environmental management provisions in loan agreements; preparing terms of reference for AMDAL, advising on consultant recruitment, handling permitting and spatial planning requirements, reviewing AMDAL, and evaluating ex-post evaluation reports for foreign funded projects.</p> <p>The DIVHSSE reorganization included changes intended to improve reporting to upper levels of management. Environmental staff deployed to Environmental Management Planning and Climate Change and Safeguard sub-units of UIP and UPP now report to the Deputy Manager, in contrast to what was previously just a Supervisor, for each sub-unit who in turn report to the Manager of the UIP or UPP. All environmental assessment reports submitted and reviewed by UIP are now forwarded by the Deputy Managers to the Manager. Although the organizational structure 'on paper' indicate that UIP and UPP Managers can report on issues and aspects to the HSSE Executive Vice President. Managers generally do not request DIVHSSE to review environmental assessment reports unless it is a UKL-UPL for a foreign funded project or particularly complex AMDAL for a PLN funded project.</p> <p>UIP/Project Construction Unit</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>Within the PLN structure, UIP are one level below the head office which are led by a Manager who has the authority as the person in charge of the UIP they lead. UIP are responsible for construction of power generation and transmission infrastructure. The sub-units are responsible for preparing terms of reference for PLN-funded AMDAL projects, and for all UKL-UPL, reviewing AMDAL, addendum ANDAL and RKL-RPL, and UJKL-UPL prepared for PLN projects, and supervising implementation of mitigation measures and monitoring requirements during the construction phase. UIP Managers will usually request that DIVHSSE review UKL-UPL for foreign funded projects. Depending on project complexity, DIVHSSE can also provide support for reviewing and finalizing AMDAL for complex PLN funded projects. The organogram for UIP is shown in Appendix 3.</p> <p>UPP/Project Implementing Unit</p> <p>UPP are one level below UIP and are led by a Manager who has the authority as the person in charge of the UP they lead. Under each UIP, there are typically two to three UPP, with the number varying regionally. UPP are responsible for supporting preparation of environmental assessments, and for overseeing implementation of mitigation measures and monitoring requirements. The organogram for UPP is shown in Appendix 4.</p> <p>UIW/Regional offices</p> <p>UIW are PLN's operational administrative offices responsible for handling the operation of power plants and transmission systems. Their main duties are to oversee health, safety and environment during a project operational phase, including occupational health and safety issues and to support revision of AMDAL and UKL-UPL as necessary. For foreign funded projects that require permits or approval, DIVHSSE will assist UIP, UPP and UIW. Organization of UIW varies regionally but</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			the general structure relating to environmental safeguard is the same as for UIP and UPP. UIW additionally have and Area Management Manager responsible for occupational health and safety, security and environment. An example organogram for UIW is shown in Appendix 5.	
A.2	Budget	M	<p>Budget information provided by PLN was insufficient to evaluate whether operational budgets are adequate. DIVHSSE Environment sub-division, UIP, UPP and UIW budgets are determined based on annual workload but it is not possible to assessment whether the budget allocations are sufficient to ensure satisfactory performance. Although the information provided by PLN does not allow for granular analysis of PLN spending on environmental management and conservation in comparison to the total corporate budget, or to assess whether for assessment report preparation and project implementation and monitoring are sufficient.</p> <p>Based on the limited budget information provided by PLN, no conclusions could be reached on the adequacy of current funding of DIVHSSE Environment sub-division, UIP, UPP and UIW operations. While indicating that budget allocations need to be increased for AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL preparation and UKL-UPL and RKL-RPL implementation, PLN did not elaborate on whether any existing budget shortfalls would be addressed through planned additional funding or whether such funding is in anticipation of increased workload.</p> <p>DIVHSSE Total costs incurred by PLN for environmental activities in the 2016 fiscal year² amounted to Rupiah 135.17 billion, or approximately \$10 million, encompassing environmental document preparation, management and environmental monitoring, and reforestation activities for surrounding area of power plants and other project facilities. The 2017 fiscal year budget allocation for DIVHSSE,</p>	Based on a detailed review of costs incurred by PLN for environmental management and conservation, consider increasing budget allocations to DIVHSSE Environment sub-division, UIP, UPP, and UIW operations, including allocation for AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL preparation and implementation.

² PLN Sustainability Report (2016).

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>excluding staff salaries and the cost of preparing AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL, was \$5,060,738,³ allocated to safety and occupational health (27%), security (57%), and environment (16%). This general environment budget was allocated to meeting donor safeguard policy requirements, review of Board of Directors' decrees on environmental management, delivery of environment-related training courses, preparation of regulatory and environmental management implementation reports, networking with external parties on environmental management, publicizing PLN's environmental management program, and preparation of visual multimedia.</p> <p>DIVHSSE Environment sub-division, UIP, UPP and UIW prepare detailed annual work plans and funding requirements for preparation and implementation of environmental assessments based on their anticipated workload for the following year, and the different programs to be implemented.</p> <p>Depending on the scope of study and remoteness of a proposed project, the budget allocated in the 2017 fiscal year for preparing an AMDAL ranged from \$35,700 to \$71,400 and for preparation of UKL-UPL ranged from \$21,400 to \$42,800. No information was available to compare the PLN budget allocations for preparation of environmental assessments with market prices. External consultants are recruited on a least cost and quality basis using annual government guidance on the use of contracts for consultant services. PLN considers these budget allocations to be sufficient to prepare good quality assessments. This view appears to be shared by a sample of consultants who agreed that the budget is sufficient to prepare assessment reports. However, PLN also indicated that additional budget will be allocated to UIP for preparation of environmental assessments starting in 2018 but did not elaborate on whether this was in anticipation of Each</p>	

³ Budget Recapitulation of K3L Division (2017).

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			anticipated increased workload, adjustments in consulting rates, or other factors.	
A.3	Staffing	W	<p>Staffing reviews are undertaken by PLN on an annual basis based on information submitted by DIVHSSE Environment sub-division, UIP, UPP, and UIW on anticipated workload. PLN then prepares an indicative staffing projection plan. Feedback from PLN that current staffing levels are considered sufficient to handle workload was inconsistent with views of UIP and UPP staff interviewed who thought that there was insufficient staff to effectively carry out unit responsibilities. Information on staffing levels necessary for DIVHSSE Environment sub-division to fulfill their new mandate is awaited from PLN.</p> <p>Staffing reviews are undertaken by PLN on an annual basis based on information submitted by DIVHSSE Environment sub-division, UIP, UPP, and UIW on anticipated workload. PLN then prepares an indicative staffing projection plan. Staffing levels at DIVHSSE Environment sub-division are considered sufficient to meet the sub-division's currently responsibilities but additional staff will likely be needed to carry out their new mandate. DIVHSSE has benefited from a recent re-deployment of PLN Directorate Regional staff who were already located at headquarters. Interviews with UIP and UPP staff indicated that the number of environment staff is considered insufficient to manage current workload. DIVHSSE acknowledged that current staffing levels may represent a constraint, limiting the availability of environment safeguard staff to review consultant assessment reports and to monitor project implementation. In response, DIVHSSE are gradually increasing staff at UIP and UPP, including hiring of more staff with graduate and post-graduate qualifications in environmental fields. In UIP and UPP, environment safeguard staff have predominantly been environmental engineers by profession.</p>	<p>Increase DIVHSSE Environment sub-division, UIP, UPP and UIW staffing levels to match future demand, including more staff with an environmental degree (i.e., not predominantly engineers) and recruitment of senior environmental staff. Revise DIVHSSE's existing system to assess staff technical competency to carry out their duties with a broader range of expertise environmental safeguard expertise.</p>

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>Environment staff in DIVHSSE Environment sub-division, UIP, UPP and UIW are required to meet minimum qualifications as specified in the Competence Directory⁴ issued by PLN headquarters. This directory provides that staff must at least be qualified in environmental safeguards, and environmental auditing. The directory does not specify the qualifications required for safety, occupational health and environment supervisors at the UIW level.</p>	
A.4	Institutional knowledge management	M	<p>PLN is devoting substantial effort to knowledge management in order to share information across the company. Most content is however currently related to engineering and other technical themes with limited environmental safeguard content.</p> <p>A dedicated Knowledge Management Unit has been established under the Director for Human Capital. The unit is responsible for ensuring strategic policy, knowledge management program, and competence development for corporate level. The unit's main responsibilities are:</p> <ul style="list-style-type: none"> – Strategic policy and regulation on knowledge management, knowledge transfer, and knowledge management audit. – Knowledge management and application of new innovations in operational units. – Improve staff competence, quality and company performance, and staff learning and competence development. <p>PLN has established a Portal Knowledge Management System at http://kmpln.pln.co.id which is used as a channel to facilitate and accelerate sharing of knowledge, expertise, experience and collaboration among staff. The portal is for internal use only. The portal is used to:</p> <ul style="list-style-type: none"> – Facilitate knowledge sharing by uploading contents into portal. 	<p>Revise the capacity development master plan and knowledge management system to expand environmental safeguard training in areas such as biodiversity, hazardous waste, worker and community health and safety, international standards on pollution prevention, meaningful community consultation, and gender and vulnerable persons. Establish a community of practice for PLN environmental safeguard staff including preparation of case studies illustrating actual project experience as a means of sharing experience.</p>

⁴ A guidance book describing all staff positions and the generic and technical skills and knowledge required for each post.

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<ul style="list-style-type: none"> – Allow staff to download data and information from the portal. – Facilitate sharing of professional experiences through making available information of their knowledge, responsibilities and opinions as a blog. – Establish a network of professionals and enable discussion on topics of interest through an online Community of Practice. <p>PLN has intranet accessible to all staff providing information on PLN's regulations; data on activities of operational units; data on customers and marketing strategy, engineering, and staff development, management infrastructure, and reporting requirements and procedures.</p> <p>System content is progressively being expanded beyond engineering and technical themes but currently lacks sufficient focus on environmental safeguards.</p>	
A.5	Technical expertise (in-house and external)	W	<p>DIVHSSE acknowledged that current staff capability is insufficient to prepare AMDAL and addendum ANDAL and RKL-RPL for foreign funded projects in house, with this work being almost entirely outsourced to external consultants. PLN also has insufficient capacity and capability at the UIP and UPP levels to prepare AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL for PLN funded projects, with almost all assessment work also being outsourced. Staff functional competency could not be assessed as PLN does not routinely evaluate staff technical performance. Mandatory training was found to be less extensive than previously thought and new staff are typically only provided with introductory training before deployment, with the consequence that staff may initially lack the capacity to supervise environmental assessment consultants, critically review assessment reports, and monitor project implementation.</p> <p>PLN's dependence on consultants to prepare AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL raises</p>	<p>Revise the current staff evaluation system to assess staff technical competency in preference to assessing number of environmental documents prepared, conduct of environmental compliance monitoring, disbursement of environmental budget. DIVHSSE should establish a consultant management system to enable DIVHSSE Environment sub-division and UIP to identify qualified and certified consultants and experts in support of AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL preparation. Routinely assess the quality of IEE/UKL-UPL being prepared</p>

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>concerns about the quality of assessments being prepared. DIVHSSE lacks a consultant evaluation system and so is unable to track well performing external consultants. In this context, the competency of UIP and UPP staff to oversee consultant work, review assessment reports, and monitor implementation becomes problematic given the challenge, particularly for less experienced staff, of reviewing poor quality reports.</p> <p>PLN's in-house environmental safeguard capacity was found to variable across the DIVHSSE organizational levels. Capacity and capability at DIVHSSE Environment sub-division is considered satisfactory for guiding consultants, review of AMDAL, and addendum ANDAL and RKL-RPL prepared for foreign funded projects, and for reviewing on request from UIP UKL-UPL prepared for foreign funded projects and AMDAL prepared for PLN projects. In contrast UIP and UPP's capacity was assessed partly satisfactory, based on their observed performance in overseeing consultants in the preparation of assessment reports prepared for PLN projects, in critically reviewing reports submitted by consultants, and methodically monitoring project implementation and monitoring.</p> <p>PLN environmental safeguard staff are supposed to complete training on AMDAL and UKL-UPL preparation but new staff while completing an environmental awareness training may not have the opportunity to attend technical courses prior to commencing work. New staff are expected to attend the next available semi-annual technical training. All staff are required to take at least one environment-related course annually. After completing the introductory AMDAL and UKL-UPL courses UIP and UPP staff should have sufficient knowledge to perform satisfactorily. However, completion of additional course in AMDAL and UKL-UPL review and impact identification and risk analysis, and specialized courses such as biodiversity assessment is viewed as necessary to ensure a higher level of competence. No conclusions can be reached on actual staff competence in fulfilling their responsibilities</p>	<p>internally to validate DIVHSSE's decision to conduct. The system should include an evaluation element where consultant performance is ascertained. The consultant pool should include experts in specialized topics such as air pollution, biodiversity, climate change, and hazardous waste.</p> <p>Assess environmental assessment training courses currently provided to PLN environment staff by universities and the HSSE Academy to ensure comprehensiveness.</p>

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>since DIVHSSE lacks an evaluation system to assessment staff technical competence and overall performance and instead focuses of work output during annual staff performance reviews. Performance indicators for environmental staff are number of environmental documents prepared, conduct of environmental compliance monitoring, disbursement of environmental budget.</p> <p>DIVHSSE environment staff are responsible for preparing terms of reference for all donor-funded and PLN-funded projects, and for reviewing AMDAL and addendum ANDAL for loan projects. UIP environment staff are responsible for reviewing AMDAL, UKL-UPL, and addendum ANDAL for PLN-funded projects. Current DIVHSSE and UIP capacity and capability is however recognized as being insufficient to prepare AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL. As a consequence, almost all environmental assessments are outsourced to consultants. DIVHSSE has an aspirational goal that UKL-UPL will increasingly be prepared in-house by UIP and UPP once in-house capacity is deemed sufficient. AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL, with some exceptions, will continue to be prepared externally for the foreseeable future.</p> <p>DIVHSSEPLN recruits' consultants through its Engineering Procurement Planning Unit. Most consultants hired are Indonesian nationals, due to the constraints of Indonesia's AMDAL certification requirements. International consultants can be part of an AMDAL preparation team but cannot be the designated team leader if not certified in Indonesia (AMDAL teams must include at least two team members that are certified including the team leader). Foreign funded AMDAL will typically have a larger number of international team members including those with specialized expertise in impact identification and risk analysis, and biodiversity impact assessment. No consultant certification restrictions apply to UKL-UPL preparation. DIVHSSE does not maintain a pool of experts and recruits' consultants on an as when necessary</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>and needed basis. PLN has memoranda of understanding with public and private universities and independent research centers to provide expertise in environmental assessment, waste management, environmental monitoring, and permit management. Consultant performance evaluation and quality assurance and quality control is not routinely done. Consultants are subject to blacklisting under certain circumstances, such as undisclosed conflicts of interest.</p>	
A.6	Legal counsel	S	<p>PLN has a corporate law division responsible for ensuring company compliance with national regulations and PLN procedures, including environmental safeguards. No information was available regarding environmental law qualifications of the legal division and whether they are involved in ensuring that PLN satisfies its regulatory requirements for environmental assessment (e.g., law division involvement in reviewing project screening).</p> <p>Within PLN headquarters there is a Division of Corporate Law responsible for ensuring compliance with internal and government regulations, including environmental safeguards. The division also supports compliance with regulations and corporate business codes related to environmental safeguards and compliance with good corporate governance principles. The division is additionally involved in settling pollution related disputes.</p>	
A.7	Supporting equipment and facilities	M	<p>Power plants are properly equipped to measure emissions, noise, electromagnetic force and water quality. As necessary PLN makes use of external analytical laboratories, which under national regulations are required to be certified. The lack of mobile monitoring equipment at regional PLN offices may limit UIP, UPP and UIW's role in spot checking on project compliance and in responding to pollution complaints.</p> <p>Power plants have instrumentation installed to measure emissions, noise, and electromagnetic force, and laboratories for water quality monitoring. As necessary, PLN makes use of</p>	<p>Revise the capacity development master plan to include intermediate and advanced training in spot emissions monitoring of power plants and other project facilities.</p> <p>Ensure that UIP and UPP are provided with mobile meters for spot emissions monitoring of</p>

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>external analytical laboratories, which under national regulations are required to be certified. Coal power plants, which use coal with sulfur contents higher than 20%, are required by regulation to install continuous emission monitoring systems to ensure that air quality standards are not exceeded.</p> <p>Where PLN lacks in-house laboratories and mobile monitoring (e.g., spot air and effluent emissions and noise) equipment it utilizes local universities and accredited commercial laboratories for sampling and measurement of physical, chemical and biological parameters in support of environmental monitoring.</p> <p>Consultants and experts preparing environmental assessments are required to use certified laboratories and confirm in assessment reports that this requirement was met. Review of sample PLN environmental assessment reports indicated that such confirmations are often not provided.</p>	power plants and other project facilities.
A.8	Capacity building program	M	<p>Although PLN has an in-house capacity building for environmental safeguards, only a limited number of directly relevant courses are currently offered, particularly on key topics such as impact identification and risk analysis. Additional environmental safeguard courses are being progressively added to the curriculum. Courses requiring certification are outsourced to external training providers. Additional information is awaited from PLN on their capacity development plan for environmental safeguard staff and new courses being considered for delivery.</p> <p>PLN has their own Corporate University which is an important element of the company's overall capacity building program. PLN's Corporate University comprises ten separate academies located in Jakarta and regionally which deliver in-house capacity building for PLN staff. The university's HSSE Academy in Semarang delivers a range of environment</p>	As part of the capacity development master plan, expediting training delivery to ensure that environmental safeguard staff successfully complete basic, intermediate and advanced training in core technical competencies, and strengthen the curriculum to include supplementary content or specialized topics such as preparation and review of environmental assessment reports, analysis of alternatives, meaningful public consultation and information disclosure, grievance redress, gender, impact identification and risk

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>related courses in addition to technical engineering and administrative matters.⁵ In 2018, a total of 1,338 staff attended specialized on the following environment-related subjects;</p> <p>Environmental Management System ISO 14001</p> <p>Corporate Environmental Management Social Responsibility and Partnerships and Community Development Program</p> <ul style="list-style-type: none"> – PGreen and Gold PROPER – Performance of HSE Maturity Level and Compliance Value – Environmental Protection and Management (basic and advanced) – Safeguard Capacity Level for Results Based Lending – Beyond Compliance Environmental Performance – Basic Environmental Audit <p>While only a few of the courses being offered are directly relevant to environmental safeguards, PLN has indicated that the academy plans to progressively offer a wider range of courses, including specialized topics.</p> <p>DIVHSSE PLN relies on external training providers to develop and deliver some courses, particularly courses requiring certification. PLN has established cooperation with several prominent universities to provide training on AMDAL and other environmental topics, among them Bogor Agricultural University, Gajah Mada University, and the University of Indonesia. Examples of specialized courses offered by the University of Indonesia are hazardous substances and hazardous waste management, environmental conflict management, UKL-UPL and RKL-RPL monitoring, and project implementation and evaluation.</p>	<p>analysis, environmental audit, biodiversity impact assessment, hazardous waste pollution control and handling, occupational and community health and safety, conduct of project implementation environmental monitoring, and international standards on pollution prevention.</p>

⁵ The curriculum of all PLN Academies during 2017 can be found, in Bahasa Indonesia, at: http://simdiklat.pln-pusdiklat.co.id/tab_es_diklat_tdk_laris.php.

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			With support from ADB and other funding partners, the World Bank, are planning to establish a network of safeguard learning centers for Indonesia. The PLN Corporate University would be included in this network.	
A.9	Supervision and monitoring responsibility	W	<p>Review of DIVHSSE's monitoring and supervision practices revealed limited UIP and UPP capacity and capability to closely monitor project implementation, including site visits. This organizational deficiency is compounded by the observed variable quality of UKL-UPL and RKL-RPL, including often unclear mitigation measures and monitoring requirements. Semi-annual monitoring reports were found to be of indifferent quality and are often not submitted to MOEF/KLHK in a timely manner. DIVHSSE acknowledged a lack of systematic follow up on corrective actions and non-compliance issues.</p> <p>Environmental supervision as prescribed in UPL and RPL begins once project construction commences. UIP are responsible for carrying out monitoring during the project construction phase and for preparing semi-annual monitoring reports. A UPP environment staff support project monitoring and reporting including ensuring that contractors comply with the provisions set out in RKL-RPL and UKL-UPL, and contracts. UPP are additionally responsible for monitoring and reporting during the project operational phase. Conditions related to environmental safeguards are stipulated when a tender is issued, and obligations related to environmental safeguards are included in all contracts with contractors.</p> <p>Monitoring of RPL and UPL implementation involves checking specified inspection parameters, threshold values or quality standards, and any critical issues observed. Sampling and measurement must be done using calibrated instruments to ensure the validity of the measurements. Monitoring reports document trends, critical parameters, and compliance. When monitoring results indicate non-compliance, the monitoring report specifies corrective actions which contractors must</p>	Strengthen capacity of PLN environment staff to review implementation monitoring reports.

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>implement under the supervision of UIP and UPP environment staff.</p> <p>LN's overall performance in environmental supervision of projects, involving implementation monitoring and preparation of semi-annual reports is considered partly satisfactory. There are indications of sometimes chronic delays in the submission of semi-annual reports and uneven quality of reports submitted.</p> <p>UIP must review all monitoring reports prior to submitting them to MOEF/KLHK offices to ensure compliance with laws, regulations, and environmental assessment requirements. There is no regulatory requirement for PLN to publicly disclose monitoring reports. Public disclosure of the operational environmental performance rating of companies is done through Indonesia's Program for Pollution Control, Evaluation, and Rating (PROPER), which is a national-level public environmental reporting initiative. PLN has established a PROPER assessment team, which is responsible for ensuring compliance with national environmental quality standards. The duties of the team are to conduct pre-assessments of the consistency of PROPER compliance, evaluate assessment results, make recommendations based on assessment results, and monitor corrective actions taken by power plants.</p>	
B.	Processes and Procedures			
B.1	Compliance with national regulations and PLN procedures	M	<p>Review of sample PLN environmental assessment reports indicated that projects generally complied with regulatory requirements and company procedures. It is important to note that this rating is not based on a comprehensive review of all PLN projects and as such instances of non-compliance may not be revealed in a smaller sample of projects.</p> <p>Review of sample PLN environmental assessment reports indicated that the projects generally complied with both national regulations and company procedures. Assessments undertaken on PLN projects cite the relevant regulations, and</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>specific requirements applicable to different project assessment types (i.e., AMDAL, addendum AMDAL and RKL-RPL, and UKL-UPL).</p> <p>In order to ensure compliance with both regulatory and procedural requirements, DIVHSSE procedures provide that all assessment reports be reviewed either at the UIP level, or by DIVHSSE Environment sub-division depending on whether projects PLN or foreign funded. Assessment reports which are considered by UIP and DIVHSSE Environment sub-division to be satisfactory are then submitted to MOEF/KLHK for their approval.</p>	
B.2	Targets to assess PLN environmental performance	W	<p>Although DIVHSSE has prepared a roadmap for the period 2018-2021 which prescribes progressively improved performance, it is questionable whether the targets are sufficiently challenging and are being achieved. The modest target of 50% of AMDAL reports exceeding Indonesian quality targets by 2018 raises concerns regarding the overall quality of assessments being prepared for PLN projects. Lacking comparable targets for UKL-UPL it is not possible to monitor performance of this type of project, which represent the majority of projects being developed by PLN.</p> <p>DIVHSSE's Environment sub-division had eight categories of targets for corporate performance in 2018, six of which are related to environmental safeguards. The most directly related targets are increasing the percentage of projects meeting Indonesian quality requirements for AMDAL, improving PLN's project operational performance as measured by the PROPER rating system, expanding project monitoring, revising the Competence Directory, and training delivery.</p> <p>DIVHSSE has prepared a roadmap for the period 2018 to 2021 which sets out progressively higher targets for each year and explains planned actions to achieve these targets. For example, from a 50% PROPER certification rate in 2018, the</p>	<p>DIVHSSE should elaborate and document performance evaluation criteria, such as specifying who quality of assessment reports is accomplished, detailed planned actions to meet progressively more stringent targets, and document whether targets are actually being achieved and the implications acceptable quality assessment reports with regard to project preparation and approval.</p> <p>DIVHSSE should set comparable quality targets for UKL-UPL.</p>

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			roadmap has a target of 70% in 2019, and 100% by 2020. Similarly, DIVHSSE recognizes that while environmental assessment reports mostly satisfy Indonesian requirements, there is a need to improve overall quality. DIVHSSE has set targets that 50% of AMDAL reports will exceed quality standards in 2018, increasing to 75% by 2019.	
B.3	Coordination with other bodies	M	<p>PLN has clear procedures for consultation and coordination with other bodies. Review of sample PLN AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL confirmed that obtaining environmental permits involved both MOEF/KLHK and its provincial and district offices, and other government agencies. Coordination is also required to ensure compliance with spatial plans. While necessary consultations may be undertaken during project preparation, there are indications that the process and timeliness could be improved. It is important to note that this rating is not based on a comprehensive review of all PLN projects and as such instances of non-compliance may not be revealed in a smaller sample of projects.</p> <p>PLN has clear procedures for consultation and coordination in obtaining permits and spatial planning approvals, and other required permits and permissions. Preparation of AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL involves both MOEF/KLHK and its provincial and district offices, and other government agencies. For example, project compliance with spatial planning is determined at the initial stage of screening in coordination with the national and sub-national agencies responsible for spatial planning. Such coordination variously involves the local Development Planning Agency, Public Works and Spatial Planning, Settlements and Housing, Local Coordination Agency for Spatial Plan or National Coordination Agency for Spatial Plan so as to ensure the conformance of proposed project locations with spatial plans. Depending on the particulars of each PLN project, additional permits may also be required from other agencies, including:</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<ul style="list-style-type: none"> – Groundwater abstraction (Ministry of Energy and Mineral Resources or its regional offices) – Hazardous waste storage, transport and use (MOEF/KLHK or its regional offices) – Forest use (MOEF/KLHK offices) <p>Consultations may also be taken place with agencies and bodies such as the General Directorate of Marine Transport.</p> <p>DIVHSSE is responsible for obtaining permits and managing all necessary consultations. Given the large number of projects underway at any time, PLN relies on an integrated management system to ensure seamless document management and control.</p> <p>Review of sample PLN AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL indicated that while projects generally complied with spatial planning and other permitting and consultation requirements, some projects deviated from the normal process and experienced timing constraints in obtaining approvals and permits.</p>	
B.4	Incorporation of pollution control and hazardous waste handling into environmental management procedures	M	<p>Pollution control and mitigation measures, and monitoring requirements while routinely included in UKL-UPL and RKL-RPL may not be inclusive of all potential impacts and/or be sufficiently detailed. It is noted that there is no regulatory requirement for UKL-UPL to include mitigation measures that result in avoided pollution. Review of sample PLN environmental assessment reports indicated that the projects generally complied with regulatory requirements relating to emissions control equipment and other pollution control measures but often lack mobile monitoring equipment necessary to conduct spot monitoring. There is a national regulation for hazardous and toxic waste management and PLN has a corresponding standard operating procedure for hazardous waste management. However, lacking</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>sufficient specialized disposal facilities in Indonesia PLN projects generally have to store hazardous materials for extended periods in inadequate and uncontrolled conditions. Review of Results Based Lending (RBL) verification reports revealed only moderate progress in addressing hazardous waste storage issues for ADB funded projects and much worse performance on PLN funded projects.</p> <p>Pollution control and mitigation measures are set out in UKL-UPL and RKL-RPL prepared for PLN projects. As part of their pollution prevention commitments, PLN focuses on avoiding or mitigating pollution through the adoption of clean technology, including use of low nitrogen oxide burners to control and reduce nitrogen oxide emissions during operation, electrostatic precipitators to contain fly ash, and enclosure systems for noise control. PLN projects conduct quarterly emission monitoring and reporting on emission loads through an emissions monitoring system. Similar monitoring and reporting are also carried out for emissions from mobile sources, and for wastewater discharges. Notwithstanding assurances from PLN and MOEF/KLHK that power plants operate cleanly, claims of degraded air quality by local residents are not uncommon.⁶</p> <p>PLN has prepared a standard operating procedure for managing waste, including hazardous wastes (e.g., <i>sulfur hexafluoride, polychlorinated biphenyls</i>). The procedure covers identification, collection, containment and storage, and transport of hazardous and non-hazardous wastes. In addition to waste management, PLN uses non-polluting technology, including a phase-out of <i>polychlorinated biphenyl</i> use for new installations since 1998. Environmental assessments undertaken for PLN projects involving hazardous wastes mostly describe the process of obtaining permits for collection and transport of hazardous wastes and maintaining hazardous</p>	

⁶ Polluting Paradise: Celukan Bawang Coal-fired Power Plant in Northern Bali. April 2018. Greenpeace.

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			waste reporting sheets. Reflecting the lack of sufficient hazardous waste disposal facilities in Indonesia, PLN projects must contend with long term storage and ongoing problems of spillages and leakage.	
B.5	Expertise for conducting environmental assessments	W	<p>DIVHSSE Review of current staffing levels and staff competencies indicated that UIP and UPP likely lack sufficient staff and/or expertise and experience to prepare AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL for PLN funded projects, with preparation of environmental assessment reports being almost entirely outsourced. There are indications that UIP oversight of external consultants preparing AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL, and capability to critical review submitted assessment reports is weak. Variable quality of external consultants is a recognized challenge, particularly in more remote locations. Lacking a consultant evaluation system, no firm conclusions can be reached on the quality of assessments being prepared, although review of sample PLN environmental assessment reports indicated widely varying quality. The review suggested that assessments prepared by university experts are comparatively of better quality than those prepared by individual consultants. Expertise requirements for experts and consultants are minimal (e.g., environment related degree and 3-5 years' experience).</p> <p>In Indonesia, project proponents are responsible for preparing AMDAL, UKL-UPL or addendum ANDAL. These assessments can be prepared directly by project proponents or by certified consultants from the private sector and experts from universities. Due to its presently limited staff capacity, PLN typically hires consultants. The present capacity of DIVHSSE Environment sub-division, and UIP and UPP to prepare environmental assessments was found to be weak as evidenced by the continual high reliance on external consultants to prepare AMDAL, addendum ANDAL and RKL-</p>	See A.5 recommendation on establishment of a consultant management system.

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>RPL, and UKL-UPL for both PLN and foreign funded projects. DIVHSSE Environment sub-division prepares AMDAL terms of reference for foreign funded projects assessments while UIP prepare terms of reference for PLN funded AMDAL projects and all UKL-UPL projects. PLN's Procurement Division handles the consultant/expert hiring process. Although PLN describe plans to increasing have UKL-UPL prepared in-house by their own staff and to occasionally prepare AMDAL and addendum ANDAL and RKL-RPL in-house DIVHSSE, this might be considered an aspirational goal given identified capacity and capacity gaps, particularly at UIP and UPP.</p> <p>Over-reliance on external consultants has implications for the quality of AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL being prepared. The capability and competence of external consultants is recognized as being variable, particularly in outlying regions where the availability of qualified consultants is comparatively smaller. As of December 2014, there were 936 certified individual AMDAL consultants in Indonesia, of which 40% were based in Jakarta and West Java.</p>	
B.6	Risk assessment	W	<p>Review of sample PLN environmental assessment reports indicated that application of impact identification and risk analysis methodologies is often weak. Assessments prepared by university experts typically apply a more comprehensive methodology but tend to focus on human impacts rather than environmental harm. It is generally apparent that some environmental impacts are overlooked, and risks are underemphasized in assessment reports. The limited capacity of UIP's in particular to review this section of assessment reports likely contributes to the acceptance of reports containing weak impact identification and risk analysis.</p> <p>PLN's corporate risk management policy and strategy includes a corporate commitment to consistent application of safeguard instruments to ensure that project impacts and risks are properly managed. In practice, conduct of impact identification</p>	<p>DIVHSSE Incorporate capacity development actions on this topic in the Capacity building master plan. See A.8 recommendation regarding updating and delivery of the capacity development action plan, including delivery of intermediate and advanced courses on impact identification and risk analysis.</p>

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			and risk analysis as part of AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL preparation was found to be partly satisfactory. Notwithstanding, weaknesses are evident in the identification of impacts and risks, with some risks being overlooked in conducting environmental assessments.	
B.7	Mitigation hierarchy	M	<p>National regulations provide that adverse impacts be avoided, minimized, mitigated and restored. This hierarchy is generally applied to PLN projects, although the term restoration is used instead of offset. Review of sample PLN environmental assessment reports confirmed that project facilities were frequently altered to minimize impacts, particularly to local communities. It is apparent however that avoidance of impacts is not uniformly attempted as evidenced by PLN project activities located either directly adjacent or inside protected and critical biodiversity areas. There are indications that PLN environmental safeguard staff capacity to assess impacts to such habitat is weak, as is understanding of appropriate mitigation and restoration/offset measures. It is important to note that this rating is not based on a comprehensive review of all PLN projects and as such instances of non-compliance may not be revealed in a smaller sample of projects.</p> <p>Review of sample PLN environmental assessment reports indicated that a mitigation hierarchy is generally being applied. At the project feasibility study stage, siting of power plants is planned to avoid sensitive areas to the extent possible. Similarly, during the assessment screening stage, actions are identified to avoid, minimize or mitigate impacts, particularly in environmentally sensitive areas, wherever feasible. PLN often shifts transmission line routes to avoid resettlement and impacts to tourism, natural sanctuaries, cultural heritage, and historical buildings.</p> <p>Lack of understanding of the magnitude and severity of potential impacts to ecologically sensitive areas may result in identification of ineffective avoidance and mitigation</p>	Update the capacity development master plan to introduce capacity building measures on mitigation hierarchy application in AMDAL, and addendum ANDAL and UKL-UPL preparation and project implementation.

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			measures, particularly relating to biodiversity restoration/offsets.	
B.8	Conduct of meaningful public consultation	W	<p>Identified equivalence gaps relating to the lack of uniform information disclosure and public consultation requirements across all project types, in practice reduces the meaningfulness, and usefulness to a project, of public consultations. The nature of consultation processes will additionally mean that not all affected parties are able to participate and gain an understanding of potential project impacts. Review of sample PLN environmental assessment reports indicated that public consultation requirements are generally complied with, but that information disclosure was inadequate. Assessment reports do not consistently summarize information dissemination and public consultation undertaken for a project and explain how issues raised were or are being resolved.</p> <p>PLN's information disclosure and public consultation procedures were found to be partly satisfactory, based on their effectiveness, comprehensiveness, and inclusiveness. In the initial announcement and public consultation stage of an AMDAL, PLN makes public announcements through local newspapers, and radio and television broadcasts, and by postings at government offices, inviting the public to respond and submit suggestions, opinions, responses, or objections to a project. The specified period normally provided for public disclosure may be too brief to enable all affected persons and interested stakeholder living far away from the public consultation venue to register their concerns. Typically, only limited information is made available regarding potential adverse environmental impacts of planned projects, with project details being provided verbally during the actual consultation. Lack of pertinent information on potential project-related impacts would necessarily weaken the consultation process.</p>	See A.8 recommendation to update the capacity development master plan to include a training course on meaningful public consultation. This course should be paired with training on information disclosure.

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>While information disclosure and public consultation requirements are even more limited for addendum ANDAL and RKL-RPL, and UKL-UPL, PLN does make an effort to inform and engage with potentially affected persons and interested stakeholders. However, it is unclear whether the aforementioned information dissemination and public consultation efforts are effective, as evidenced by the typically limited feedback provided, particularly in rural areas where people are less familiar with written communication. Participation of women and most vulnerable groups in consultations can be limited, with few women attending consultations unless they are the heads of their households, and other vulnerable groups may not be adequately engaged with.</p> <p>Potentially affected persons, community leaders, family welfare organizations, and local non-governmental organizations typically participate in public consultations as part of AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL assessments. Such consultations are supported with questionnaires that allow people to respond both orally and in writing during a consultation. Consultations are generally well documented with suggestions, opinions, and responses being recorded, and then checked and verified by PLN. Depending on the significance and validity of the issues raised, public participation may lead to revisions to environmental assessment reports. Although reports describe the public consultation process, they often do not summarize how the project has responded to feedback provided, including any changes to project design, location and operation.</p>	
B.9	Grievance redress mechanism	M	<p>PLN's grievance handling procedure sets out a clear process for receiving complaints, taking corrective actions, and reporting resolution of complaints. PLN responds to grievances through its existing complaint resolution processes applicable during project construction and operational phases. In preparing this</p>	<p>See A.8 recommendation to update the capacity development master plan to include a training course on grievance redress.</p>

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>acceptability assessment it was not possible to verify the adequacy of PLN's GRM process in addressing complaints from both affected persons and environmental non-governmental organizations.</p> <p>Review of sample PLN environmental assessment reports and discussions with PLN about their procedures indicated that the company's grievance receipt and resolution process is moderately satisfactory. PLN responds to grievances received through its existing complaint resolution processes. Complaints arising during the project construction phase and received directly by PLN are handled by the UIP Public Relations/Communication Department which verifies and forwards the complaint to the responsible unit with authority to respond. PLN additionally notifies MOEF/KLHK of any complaints received for the ministry's follow up. Grievances raised through customary community processes are forwarded by village leaders and/or customary leaders to the local PLN office. Complaints received by MOEF/KLHK offices are verified and then forwarded to PLN for resolution. When a PLN office receives a notification or warning from MOEF/KLHK or one of its regional offices, the corresponding regional PLN office is supposed to act immediately. The MOEF/KLHK grievance redress mechanism has a procedure requiring local authorities to document that the complaint was identified, noted, managed and resolved. PLN also has a complaint management system accessible through a call center 123, online by using an integrated complaint-solving application, and at local customer services offices. This system allows affected persons to report any incident or complaint about PLN operations.</p> <p>Documentation of the functioning of the PLN's grievance mechanism appears to be limited (i.e., maintenance of a grievance log indicating date of receipt of complaints, and evidence of how they were addressed), making it difficult to track PLN's performance for this sub-component.</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
B.10	Protected area and biodiversity conservation	W	<p>Review of sample environmental assessment reports indicated that PLN adheres to applicable regulations and procedures. The quality of assessments prepared, and PLN's existing capacity is however of concern in terms of screening, and impact identification and risk analysis. A number of examples were identified in ADB RBL verification reports where substation and transmission line construction work occurred immediately adjacent to or within protected and/or key biodiversity areas with limited evidence that mitigation and restoration measures had been successfully implemented as evidenced in part by a lack follow up monitoring of any changes in species presence and abundance.</p> <p>PLN's procedures applicable to protected areas and biodiversity conservation were found to be partly satisfactory. Review of sample PLN environmental assessment reports indicate that while PLN generally complies with all procedural requirements, weaknesses include screening, and impact identification and risk analysis.</p> <p>Prevention or avoidance of project impacts on ecologically sensitive areas is anticipated at the screening stage of the environmental assessment process, when MOEF/KLHK and their regional offices evaluate compliance of a project location with the corresponding spatial plan. Project locations must also comply with indicative maps of new development permit moratorium. No business and/or activity is allowed in a moratorium and forested areas, except for special cases, and with very strict requirements.</p> <p>EIA/AMDAL, IEE/UKL-UPL, and addendum EIS/ANDALAMDAL prepared for foreign funded and PLN funded projects which pose potential biodiversity impacts generally provide sufficiently detailed baseline information on which to assess impacts to terrestrial and aquatic habitats. More limited baseline information is required for addendum ANDAL and RKL-RPL, and UKL-UPL with the consequence that potential impacts may not be properly understood. Impact</p>	<p>See A.8 recommendation to update the capacity development master plan to include a training course on biodiversity impact assessment. The course should cover screening and assessment of biodiversity impacts to terrestrial and marine habitat, including unprotected and protected forest, mangrove, seagrass and coral.</p>

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>identification and risk analysis is typically not sufficiently rigorous, and as a result can overlook or incorrectly characterize potential impacts to natural and critical habitat.</p> <p>A number of examples were identified in ADB RBL verification reports where substation and transmission line construction work occurred immediately adjacent to or within protected and/or key biodiversity areas with limited evidence of mitigation and restoration measures had been successfully implanted as evidenced by follow up monitoring of any changes in species presence and abundance.</p>	
B.11	Screening	M	<p>PLN projects are routinely screened to determine the type of environmental assessment necessary. Consideration is also given to spatial plans, permitting requirements, development moratoriums, and designated protected areas. ADB RBL verification reports indicate however that project screening does not consistently conform to regulatory requirements, with some PLN projects occurring immediately adjacent to or within protected areas being screened as UKL-UPL rather than AMDAL.</p> <p>Review of sample PLN environmental assessment reports and discussion with PLN staff indicated that screening is routinely undertaken in consultation with MOEF/KLHK and regional offices to determine what type of assessment was required. An identified omission is that screening is not done for electricity distribution lines unless they pass through protected areas.</p> <p>Screening of PLN projects is considered mostly satisfactory, with all projects being screened according to legally established criteria to determine what safeguard instrument is applicable (i.e., EIA/AMDAL, IEE/UKL-UPL, addendum EIA/ANDAL). Additionally, all projects are checked for compliance with the respective spatial plan, a confirmation of which is attached as an appendix to an identified exception in the screening process concerns electricity distribution lines which are not currently subject to assessment if they do not</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>pass through protected areas, but which have the potential to cause environmental and social impacts assessment reports. Similarly, compliance with other permitting requirements, development moratoriums, and protected areas restrictions is routinely checked. ADB RBL verification reports indicate however that screening may be inconsistent, with some projects occurring immediately adjacent to or within protected areas being screened as UKL-UPL rather than AMDAL.</p>	
B.12	Scoping	M	<p>Scoping is required for AMDAL projects. This is consistent with normal practice in other countries. While desirable, PLN is not required to undertake scoping for addendum ANDAL and RKL-RPL projects, which often involve large expansions of existing projects and larger UKL-UPL projects which may cause significant impacts similar to AMDAL projects.</p> <p>PLN projects screened as requiring an AMDAL routinely undertake scoping to comply with regulatory requirements. Scoping is not applicable to UKL-UPL project, but it would be desirable to prepare a scoping report for large UKL-UPL projects which may cause significant impacts. Similarly, although addendum ANDAL and RKL-RPL projects are subject to internal peer review by PLN to ensure the thoroughness of an assessment, it is desirable to have a more detailed scoping process, particularly for projects involving large expansions.</p>	<p>Although scoping is not required for addendum ANDAL and RKL-RPL, and UKL-UPL projects, a scoping exercise should still be undertaken to establish the assessment coverage. Gaps in scoping of these types of projects is addressed in the Environmental Equivalence Assessment Action Plan.</p>
C.	Outputs and Outcomes			
C.1	Content of the assessment report	M	<p>In terms of coverage of required topics, AMDAL generally are more comprehensive than addendum ANDAL and RKL-RPL, and UKL-UPL which are not required to cover all topics and less detailed content is expected. DIVHSSE's modest targets of 50% of reports will be of acceptable quality by 2018 rising to 75% by 2019 indicate that, even if the targets are being achieved, many AMDAL reports submitted for review by PLN and approval by</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>MOEF/KLHK are not of acceptable quality, including report content. Factors considered in evaluating the content of assessment reports include the quality of documentation provided on baseline conditions and the depth of analysis. Based on review of sample PLN UKL-UPL it is clear that these assessments are typically of lesser quality compared to AMDAL reports. PLN and MOEF/KLHK both confirmed that unacceptable quality AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL are often subject to extensive revisions and are eventually rejected or approved. It is not unusual for assessment reports to be repeatedly submitted to MOEF/KLHK for their approval</p> <p>AMDAL prepared for PLN projects were found to be partly satisfactory, generally covering all required topics. The content of AMDAL reports is typically comprehensive but may overlook issues not properly identified in the scoping process. Other apparent weaknesses are lack of sufficiently detailed project descriptions and inconsistent description of baseline conditions.</p> <p>IEE/Addendum ANDAL and RKL-RPL have less content than an AMDAL. While addendum ANDAL and RKL-RPL are not required to undertake scoping, analyze alternatives, disclose information to the public, or hold public consultations, large expansions of existing projects could cause significant impacts and as such PLN should ensure that more in-depth assessment be undertaken.</p> <p>UKL-UPL reports also have less comprehensive compared to AMDAL reports, reflecting the lack of an explicit requirement to cover certain topics such as baseline conditions, analysis of alternatives, impact identification and risk analysis, information disclosure, and public consultation. While some topics are not explicitly required for UKL-UPL projects, sufficient baseline information should be provided to enable informed</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>assessment of impacts and identification of corresponding mitigation measures.</p> <p>The overall quality of environmental assessment reports, include the completeness of report content, is of concern. DIVHSSE's modest targets of 50% of AMDAL reports being of acceptable quality by 2018 rising to 75% by 2019 indicate that, even if the targets are being achieved, many AMDAL reports submitted are not of acceptable quality. Although quality targets have not been set for UKL-UPL, review of sample reports indicates that the quality, and content, of UKL-UPL is comparatively weaker.</p>	
C.2	Quality of analysis	W	<p>AMDAL and addendum ANDAL and RKL-RPL are typically more detailed and involve both quantitative and qualitative analytical methods compared to the reduced detail and simpler methodologies used in UKL-UPL. Review of sample AMDAL reports indicated that topics such as scoping, baseline analysis, impact identification and risk analysis, analysis of alternatives, cumulative, indirect and induced impacts, and pollution prevention are often only partially covered, and that the depth of analysis is often inadequate. AMDAL prepared for foreign funded projects appear to be of better quality, providing more comprehensive content on all topics, than AMDAL prepared for PLN projects. Fewer topics are required to be covered in UKL-UPL and generally impact identification and risk analysis is more rudimentary.</p> <p>The quality of impact identification and risk analysis in AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL prepared for foreign funded projects was found to be satisfactory, while AMDAL prepared for PLN projects was only partly satisfactory. AMDAL and addendum ANDAL and RKL-RPL typically utilize a combination of qualitative and semi-quantitative impact and risk analysis assessment, augmented by modelling as needed, to evaluate the magnitude and significance of potential adverse impacts. UKL-UPL mostly</p>	See A.8 recommendations on updating the capacity development action plan to include coverage of all required environmental assessment topics.

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>utilize a more simplified analysis of impacts. Despite the application of a comprehensive impact identification and risk analysis methodology in AMDAL, some impacts may go unnoticed or not be fully particularized, possibly due to incomplete or inadequately detailed baseline information. For example, incomplete data on wildlife species that could potentially be impacted by project activities will affect the quality of the impact identification and risk analysis. For UKL-UPL, the quality of analysis varies across projects as does the coverage of topics which is dictated by the required format and content and any additional local government requirements. Because UKL-UPL type projects are not expected to cause significant adverse impacts less attention is given to impact identification as compared to AMDAL. The combination of no requirement to assemble baseline data and a more rudimentary impact identification and assessment methodology may result in impacts being overlooked and the magnitude of impacts underestimated. This is of particular concern given the range of UKL-UPL type PLN projects, including larger projects which are not screening as AMDAL type projects, but which could potentially cause significant environmental impacts.</p>	
C.3	Consideration of alternatives	M	<p>Review of sample PLN environmental assessment reports indicated that there is limited consideration of alternatives. This reflects the regulatory requirement that AMDAL shall assess alternative locations but not alternative project designs or technology. Additionally, the ‘no-project’ option is rarely considered. Addendum ANDAL and RKL-RPL for project expansions are also not required to consider alternatives given their fixed project location but will typically consider new technologies for economic and efficiency reasons. Consideration of alternatives is not required in UKL-UPL.</p> <p>Analysis of alternatives in AMDAL prepared for foreign funded and PLN projects was found to be partly satisfactory based on the limited range of alternatives considered or explained in</p>	See A.8 recommendations on updating the capacity development action plan to include a course on consideration of alternatives.

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>environmental assessment reports. For example, project modifications are often made during the feasibility stage but may not be described in assessment reports. While analysis of alternative locations is a regulatory requirement in AMDAL, there is no requirement to identify and assess alternatives to the design of a project or to the technology that the project will use. PLN assesses alternatives on the basis of both non-financial and financial criteria. A key non-financial consideration is a project's environmental acceptability. The financial criteria in turn assess which alternatives are feasible and cost effective. Analysis of alternatives typically considers production capacity, location of project components, production technology, building layout, and timing and duration of operations. Alternative locations are particularly considered in the siting of new power plants, and the siting of transmission towers and alignment of transmission lines to avoid impacts on socially and/or environmentally sensitive areas. Consideration of the 'no project' alternative is uncommon.</p> <p>The analysis of alternatives as described in most PLN environmental assessments is overly narrow. Consideration of the 'no project' alternative is uncommon. Analysis of alternatives in addendum ANDAL is not explicitly required given the fixed location of existing projects. New technologies are however normally considered given that project expansions will seek to adopt newer technologies compared to an existing power plant.</p> <p>There is no regulatory requirement for assessment of alternatives of any kind for UKL-UPL but there is a requirement that during project screening local government authorities shall determine whether technology is available to mitigate any potential impacts.</p>	
C.4	Environmental management plan	W	UKL-UPL and RKL-RPL generally describe mitigation measures and monitoring requirements during project construction and operation phases and follow the	See A.8 recommendations on updating the capacity development action plan to

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>required format. Mitigation measures and monitoring requirements are however typically not sufficiently comprehensive, often lacking detail on the intent of such measures. Greater clarity is also needed on the nature and design of monitoring programs. Respective responsibilities for implementation of mitigation measures and conduct of monitoring programs, and the allocation of funds for mitigation and monitoring are often not clearly stated. The same weaknesses were repeatedly identified in the review of sample PLN UKL-UPL and RKL-RPL monitoring reports. Specific examples of unsatisfactory implementation of mitigation measures were identified in ADB RBL verification reports where construction was not accomplished according to design specifications and where the standard of construction was found to vary widely.</p> <p>RKL-RPL and UKL-UPL prepared for PLN projects were found to be only partly satisfactory. While the plans generally adhere to the required format and cover standard topics, mitigation measures and monitoring requirements applicable during construction and operation phases are often not sufficiently described (e.g., intent of planned mitigations, monitoring program design, implementation responsibilities, budget allocations). Although UKL-UPL content requirements were clarified by MOE Regulation 16/2012 there is still no requirement for UKL-UPL to provide mitigation measures that reduce potential adverse impacts to a level of no significant harm.</p> <p>Review of sample RKL-RPL and UKL-UPL and semi-annual implementation monitoring reports for both PLN and ADB-funded projects indicated that mitigation measures and monitoring requirements are generally not sufficiently comprehensive, particularly in UKL-UPL, often lacking detail on the intent of planned mitigations, and their implementation arrangements. The nature and design of monitoring programs is frequently unclear, respective responsibilities for</p>	<p>include coverage of project implementation monitoring and reporting.</p>

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>implementation of mitigation measures and conduct of monitoring are not specified, and funds allocated for mitigation and monitoring not plainly stated.</p> <p>Specific examples of unsatisfactory implementation of mitigation measures were identified in ADB RBL verification reports. Contrary to DIVHSSE claims that adequate oil retention facilities were installed at all extended or upgraded substations being funded by ADB, the standard of work was found to vary widely. While retention facilities (bund walls) at substations were of generally of good quality, bund walls were sometimes found to be inadequate to contain major spills or leaks. Further, parts such as elevated oil tanks of transformers extended beyond bund walls, suggesting that any spills or leaks from these parts will not be contained.</p> <p>Comparatively better performance was observed for warehouse and waste management improvements on ABD-funded projects. Improvements were noted in the labelling of not operating assets such as used transformers in storage, labelling of transformers manufactured before 1985 (i.e., potentially containing polychlorinated biphenyls), and labelling of broken transformers. Design and construction of warehouse facilities was found to be inadequate at several locations, with construction not having followed design specifications for oil-water interceptors and/or the limited functionality of installed interceptor systems. Clean-up of small oil spills was assessed as satisfactory. Warehouse practices in the separation and draining of oil from broken transformers and analysis of drained oil for PCBs were found to vary widely, largely due to a lack of a PCB containing oil management guideline endorsed by PLN. Current practice at PLN warehouses ranged from draining oil from individual transformers into individual barrels for easy recognition and testing (best practice) to storing all oil drained from pre-and post-1985 into mixed drums or large storage tanks (poor practice). Inspection of non-ADB funded PLN warehouse facilities indicated that conditions of these warehouses are much worse in terms of</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>industrial waste management compared to the ADB-funded facilities. Potentially leaking transformers earmarked for disposal are being stored unlabeled outside on unprotected ground, posing a risk of oil spills contaminating surrounding soils and groundwater, which could lead to health hazards for communities located in close proximity to the storage sites. PLN expects to improve their oil storage and testing following issuance of a MOEF/KLHK Standard Operating Procedure for Inventory, Testing, and Storage of PCB-containing oil in early 2019.</p>	
C.5	Method for review of content and substance of reports submitted	W	<p>Discussions with DIVHSSE and review of institutional arrangements indicated that the process for reviewing environmental assessment reports needs to be significantly improved. Internal review of reports focuses primarily on regulatory and administrative compliance and not technical issues. Deficiencies in the review process are exacerbated by limited capacity of UIP to review assessment reports.</p> <p>PLN's procedure for and conduct of assessment report review was found to be partly satisfactory. While routinely covering regulatory, administrative and, to a lesser extent, technical content, inconsistency is apparent in the review process. PLN environment safeguard staff at the DIVHSSE Environment and UIP level DIVHSSE staff review AMDAL and addendum ANDAL and RKL-RPL respectively for foreign and PLN funded projects. UIP review all UKL-UPL reports, receiving guidance from DIVHSSE on foreign funded projects. Internal review focuses primarily on regulatory and administrative compliance but also considers technical issues and may include making recommendations on changes to project siting and design. Following DIVHSSE Environment sub-division's and UIP review of assessment reports they are forwarded to MOEF/KLHK and their regional offices for approval.</p> <p>While content and substance of assessment reports prepared for PLN projects may be satisfactory, the quality of such</p>	See A.8 recommendations on updating the capacity development action plan to include more detailed course content on critical review of environmental assessment reports.

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>reports continues to represent a challenge for DIVHSSE's Environment sub-division. That DIVHSSE has set only modest quality targets (50% of reports meeting Indonesian quality standards in 2018, increasing to 75% in 2019) strongly suggests that report quality is generally inadequate. DIVHSSE's report review process may exacerbate this inadequacy if robust scrutiny of reports is lacking due to weaknesses in the capacity and capability of environmental safeguard staff with primary responsibility for reviewing reports. Observed gaps in supervision and oversight of the UIP report review process will tend to worsen the situation.</p>	
C.6	Arrangements for access to assessment and monitoring reports	M	<p>Regulatory requirements and PLN and MOEF/KLHK procedures make limited provision for accessing environmental assessment and monitoring reports by interested parties. While PLN fulfills these requirements and follows procedure is would be desirable for PLN to make available both approved and updated environmental assessment reports, and semi-annual project monitoring reports on their website. The availability of assessment and monitoring reports and difficulty of accessing available reports from PLN or MOEF/KLHK upon request may limit access to information by interested parties.</p> <p>Disclosure of environmental assessment and implementation monitoring reports either by PLN and/or MOEF/KLHK was found to be only partly satisfactory. There is no legal requirement for PLN to themselves disclose AMDAL, addendum ANDAL and RKL-RPL, or UKL-UPL either prior to or following approval, nor is PLN required to disclose implementation monitoring reports. Instead, MOEF/KLHK and its regional offices are responsible for disclosure of approved assessment reports.</p>	
C.7	Requirements for implementation and monitoring	W	<p>Review of example semi-annual construction and operational phase monitoring reports for PLN projects indicated that performance is only partly satisfactory. Implementation monitoring is constrained by lack of</p>	Build capacity of UIP and UPP

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
			<p>specificity of required UKL-UPL and RKL-RPL content, hampering monitoring of all aspects of project implementation. Evidence of PLN under-staffing for environmental safeguards and possible budget constraints would necessarily limit conduct of site visits to monitor implementation and to ensure timely submission of monitoring reports for MOEF/KLHK approval. Greater clarity is needed on project track records in completing agreed corrective actions and in the handling by PLN of non-compliance issues.</p> <p>As a project proponent, PLN is responsible for monitoring AMDAL, addendum ANDAL and RKL-RPL, and UKL-UPL implementation on a semi-annual basis. MOEF/KLHK and its regional offices are responsible for supervising such monitoring.</p> <p>Monitoring parameters typically include time series data on air and water quality, and noise; comparison of physio-chemical monitoring data with permitted levels; and identification of non-compliance for any monitoring parameter. Additionally, monitoring of electric magnetic fields and fire risk may be undertaken and reported. Monitoring reports are required to specify necessary corrective actions and/or proposed new mitigation and/or monitoring requirements.</p> <p>Review of sample PLN projects under implementation indicated that submission of monitoring reports was not uniformly timely, with some projects being chronically late in submitting reports. Project compliance with permitted levels such as environmental quality standards appears to be satisfy requirements, but data presentation and explanation of results could generally be improved. Not all reports included the required confirmation that analyses were carried out by an Indonesia National Accreditation Committee accredited laboratory.</p>	

No.	Component/ Subcomponent	Rating ¹ S/M/W	Assessment Findings	Recommendations
C.8	Environmental Audit	W	<p>Although conduct of audits in stipulated circumstances is a regulatory requirement, PLN considers that such audits are seldom considered necessary. Limited information was available from PLN for purposes of this assessment on the adequacy of audit procedures and follow up actions taken.</p> <p>High-risk projects and activities and those that are suspected of violations may be subjected to environmental audit. Although conduct of an environmental audit in stipulated circumstances is a regulatory requirement, such audits are seldom considered necessary. Instead, as part of PLN's integrated management system, which includes ISO 14001 on environmental management, UIW conduct regular audits of power plant operations.</p> <p>Additionally, PLN power plants self-assess and report under PROPER. Based on PLN's 2016 Sustainability Report, out of 81 power plants, three had green ratings (very good), 70 had blue ratings (compliance), and eight had red ratings (non-compliance). None of PLN's plants had a gold (excellent) or black (causing environmental damage) rating. These PROPER ratings, with around 10% of projects being non-compliant, indicate that improvements could be sought in individual project performance.</p>	See A.8 recommendation on updating the capacity development action plan to include more detailed course content on conduct of environmental audits.

SUMMARY OF PROJECTS ASSESSED FOR ENVIRONMENTAL ACCEPTABILITY

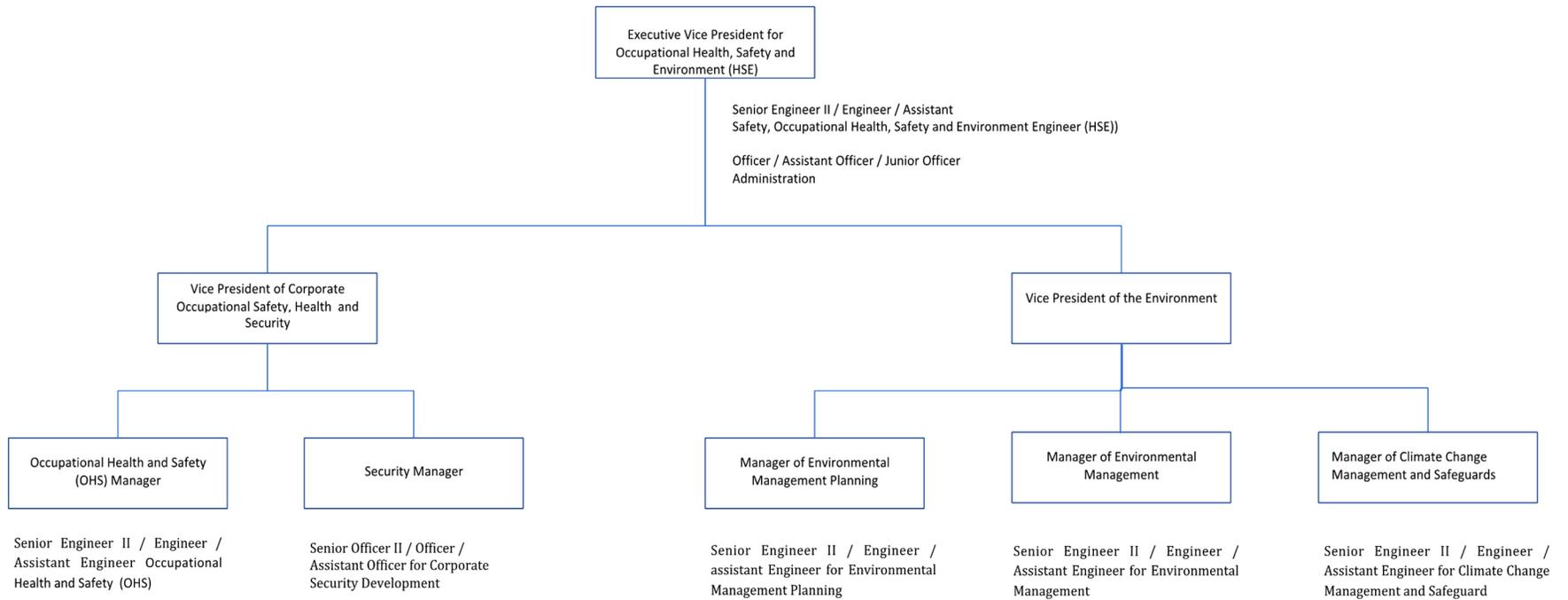
No.	Project Name/ Location	Project Funding	Project Status	Assessment Method and Documents Review	Indonesian Permitting Category	ADB Project Category	Brief Review of Environmental Documents
1	Kadipaten 150kV Incomer High Voltage Power Transmission Line and 150kV Sub-Station Project in Majalengka Regency, West Java	PLN	<ul style="list-style-type: none"> - UKL-UPL completed - Construction phase 	<ul style="list-style-type: none"> - Site visit - UKL-UPL document - UKL-UPL implementation reports for 2017 	UKL-UPL (project scale is <150kV)	B	The UKL-UPL satisfactorily describes mitigation measures and monitoring requirements for relatively insignificant impacts associated with the construction and operation of power transmission line.
2	Tanah Lot 150kV Incomer Power Transmission Lines and 150kV Gas Insulated Switchgear in Tabanan Regency, Bali	PLN	<ul style="list-style-type: none"> - UKL-UPL completed - Construction phase 	<ul style="list-style-type: none"> - Site visit - UKL-UPL document - UKL-UPL implementation reports for 2017 	UKL-UPL (project scale is <150kV)	B	The UKL-UPL is moderately satisfactory, defining mitigation measures and monitoring requirements for relatively low-level impacts associated with the construction and operation of power transmission line of such scale.
3	PLTU 2 Jawa Tengah 500 kV Power Transmission Line and 500 kV Main Switchgear in Cilacap Regency, Central Java	PLN	<ul style="list-style-type: none"> - AMDAL completed - Operational phase 	<ul style="list-style-type: none"> - Site visit - AMDAL documents - RKL-RPL implementation reports for 2012 	AMDAL (project scale is >150kV)	B	The AMDAL is moderately satisfactory in terms that the scoping process through to impact assessment, and defining mitigation measures and monitoring requirements have been undertaken. Community concerns due to the operation of the transmission lines are not adequately assessed.
4	Kutampi 6 X 2MW Diesel Fueled Power Plant in Klungkung Regency, Bali	PLN	<ul style="list-style-type: none"> - UKL-UPL completed - Operational phase 	<ul style="list-style-type: none"> - Site visit - UKL-UPL implementation reports for 2016 	UKL-UPL (project scale is <100MW)	B	UKL-UPL implementation reports satisfactorily describe environmental mitigation and monitoring activities undertaken.
5	Bali -Nusa Lembongan 20 kV Subsea Power	PLN	<ul style="list-style-type: none"> - UKL-UPL completed 	<ul style="list-style-type: none"> - Site visit 	UKL-UPL (project scale is <150kV)	B	The UKL-UPL satisfactorily describes impacts, and

No.	Project Name/ Location	Project Funding	Project Status	Assessment Method and Documents Review	Indonesian Permitting Category	ADB Project Category	Brief Review of Environmental Documents
	Transmission Cable (17 km) in Gianyar and Klungkung Regencies, Bali		– Suspended	– UKL-UPL document			mitigation measures and monitoring requirements for the construction and operation of sub-sea power transmission lines. The baseline information in the UKL-UPL is extensive and the assessment of impacts on biodiversity is satisfactory.
6	Minahasa Peaker 150 MW Gas/Fuel Fired Power Plant in Minahasa Utara Regency, North Sulawesi	PLN	Study phase (AMDAL scoping)	– Site visit – AMDAL terms of reference	AMDAL (project scale is >100MW)	A	The AMDAL terms of reference is satisfactory, defining key potential impacts, from the pre-construction and post operation phase, and requirements for baseline studies to be undertaken.
7	Lontar Coal-Fired Power Plant Expansion 1 x315MW in Tangerang Regency, Banten	BOC, PLN	– Addendum AMDAL and RKL-RPL completed – Pre-construction phase	– Site visit – Addendum AMDAL and RKL-RPL documents	Addendum AMDAL and RKL-RPL (expansion of existing power plant)	A	The addendum ANDAL and RKL-RPL are moderately satisfactory in terms of the range of key environmental impacts covered, the depth of environmental assessment undertaken, and mitigation measures and monitoring requirements defined. The impact assessment of coastal seawater quality, and marine biota is not sufficiently comprehensive.
8	Lapai Minihydro Power Plant Unit 1 2 x 2MW in Kolaka Utara Regency, South-east Sulawesi	PLN	– AMDAL completed – Pre-construction phase	– Desk study – AMDAL documents	AMDAL instead of UKL-UPL (justification is unclear)	B	The AMDAL is moderately satisfactory, describing project impacts, public consultations, and mitigation measures and monitoring requirements. Content on project description and scoping is partly satisfactory.

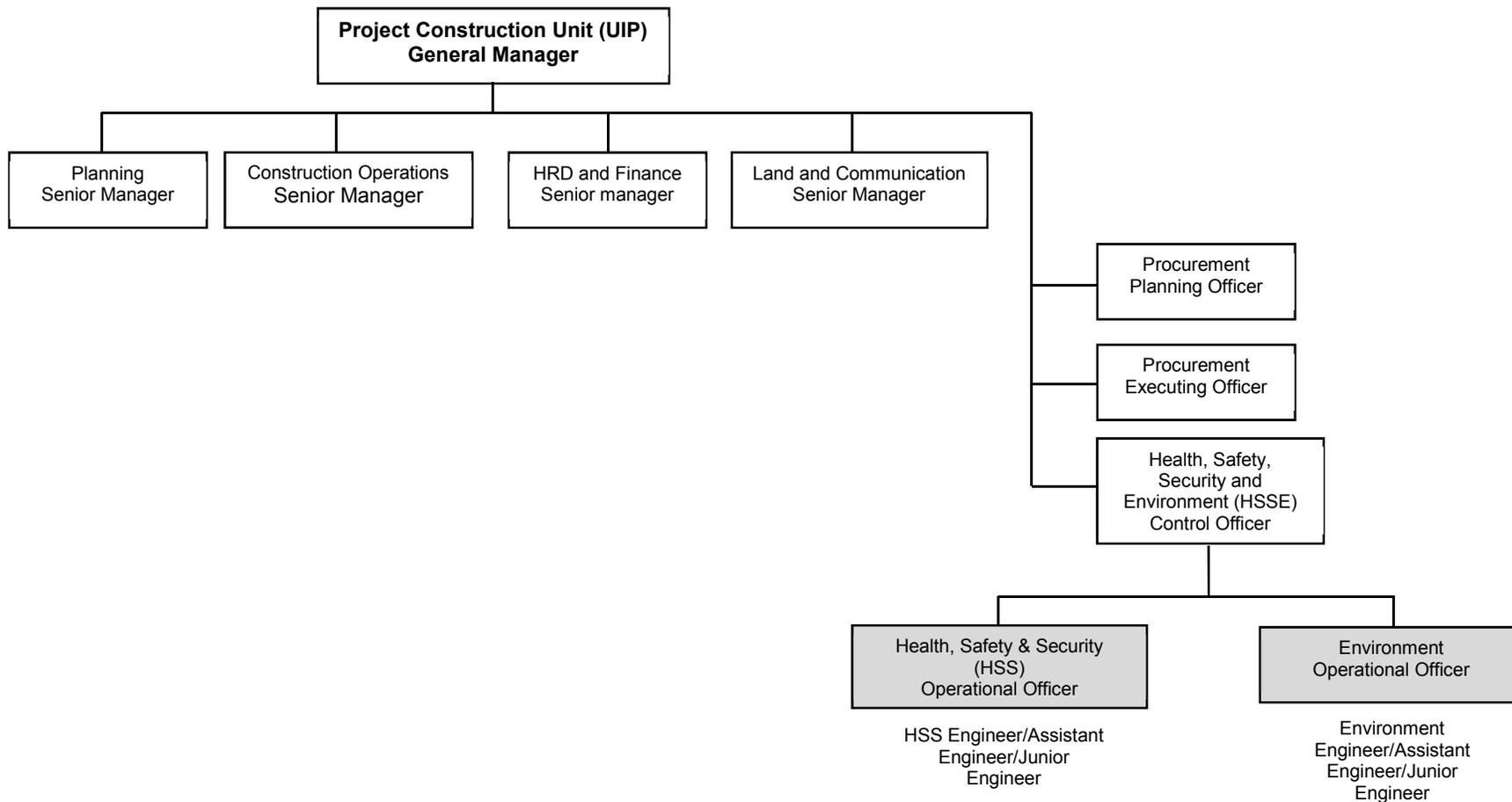
No.	Project Name/ Location	Project Funding	Project Status	Assessment Method and Documents Review	Indonesian Permitting Category	ADB Project Category	Brief Review of Environmental Documents
9	Nonohonis – Kefamenanu 70kV Power Transmission Line (45-km long) and Tower in Timor Island, East Nusa Tenggara	PLN	– AMDAL completed – Pre-construction phase	– Desk study – AMDAL documents	AMDAL (part of the transmission line and towers is located in protection forest and limited production forest)	A	The AMDAL is moderately satisfactory, covering a range of impacts including endangered flora and fauna species.
10	Namlea 10 MW Gas/Fuel Fired Power Plant in Buru Regency, Maluku	PLN	– UKL-UPL completed – Pre-construction phase	– Desk study – UKL-UPL document	UKL-UPL (project scale is <100MW)	B	The UKL-UPL is moderately satisfactory, providing an adequate description of the project, baseline information, and mitigation measures and monitoring requirements.
11	Saumlaki 10 MW Gas- and Diesel-fired Power Plant in Maluku Tenggara Barat Regency, Maluku	PLN	– UKL-UPL completed – Pre-construction phase	– Desk study – UKL-UPL document	UKL-UPL (project scale is <100MW)	B	The UKL-UPL is satisfactory, providing comprehensive baseline information, and environmental and social mitigation measures and monitoring to be undertaken by the project.
12	150kV Malingping – Bayah Power Transmission Lines and Towers in Lebak Regency, Banten	PLN	– UKL-UPL completed – Construction phase	– Desk study – UKL-UPL document – UKL-UPL implementation reports for 2017	UKL-UPL (project scale is <150kV)	B	The UKL-UPL is moderately satisfactory, describing project impacts, feedback from public consultation, permitting requirements, and mitigation measures and monitoring requirements.
13	Malifut 5 MW Gas/ Diesel Fueled Power Plant in Maluku Tenggara Barat Regency, Maluku	PLN	– UKL-UPL completed – Pre-construction phase	– Desk study – UKL-UPL document	UKL-UPL (project scale is <100MW)	B	The UKL-UPL is moderately satisfactorily, describing the project, baseline conditions, and mitigation measures and monitoring requirements.
14	Sofifi 10 MW Gas/ Diesel-fueled Power	PLN	– UKL-UPL completed	– Desk study	UKL-UPL (project scale is <100MW)	B	The UKL-UPL is satisfactory, providing a comprehensive

No.	Project Name/ Location	Project Funding	Project Status	Assessment Method and Documents Review	Indonesian Permitting Category	ADB Project Category	Brief Review of Environmental Documents
	Plant in Ternate Regency, North Maluku		– Pre- construction phase	– UKL-UPL document			project description, environmental baseline, and mitigation measures and monitoring requirements.
15	Namrole 10 MW Gas/ Diesel-fueled Power Plant in Buru Selatan Regency, Maluku Province	PLN	– UKL-UPL completed – Pre- construction phase	– Desk study – UKL-UPL document	UKL-UPL (project scale is <100MW)	B	The UKL-UPL is satisfactory, providing a comprehensive project description, baseline information, and mitigation measures and monitoring requirements.
16	Ternate 30MW Gas/Diesel-fueled Power Plant in Ternate, Mauluk Utara Province	PLN	– UKL-UPL completed – Construction phase	– Desk study – UKL-UPL document	UKL-UPL (project scale is <100MW)	B	The UKL-UPL is moderately satisfactory, providing an adequate project description, baseline information, and mitigation measures and monitoring requirements.
17	Muara Karang 500MW (Peaker) Gas/Coal-fired Power Plant, Jakarta	PLN	– Addendum ANDAL and RKL-RPL completed – Construction phase	– Desk study – Addendum ANDAL and RKL-RPL documents	Addendum ANDAL and RKL- RPL (expansion of existing power plant)	A	The addendum ANDAL and RKL-RPL are satisfactory, providing a comprehensive assessment of significant impacts from the existing and expanded power plant, and mitigation measures and monitoring requirements.
18	Tanjung Awar-Awar Coal-fired Power Plant Expansion (Unit 3) 2x 150MW, East Java	PLN	– Addendum ANDAL and RKL-RPL completed – Construction phase	– Desk study – Addendum ANDAL and RKL-RPL documents	Addendum ANDAL and RKL- RPL (expansion of existing power plant)	A	The addendum ANDAL and RKL-RPL is moderately satisfactory, providing an adequate project description, baseline information and impact assessment from the existing project operations, and additional mitigation measures and monitoring requirements for the expanded plant.

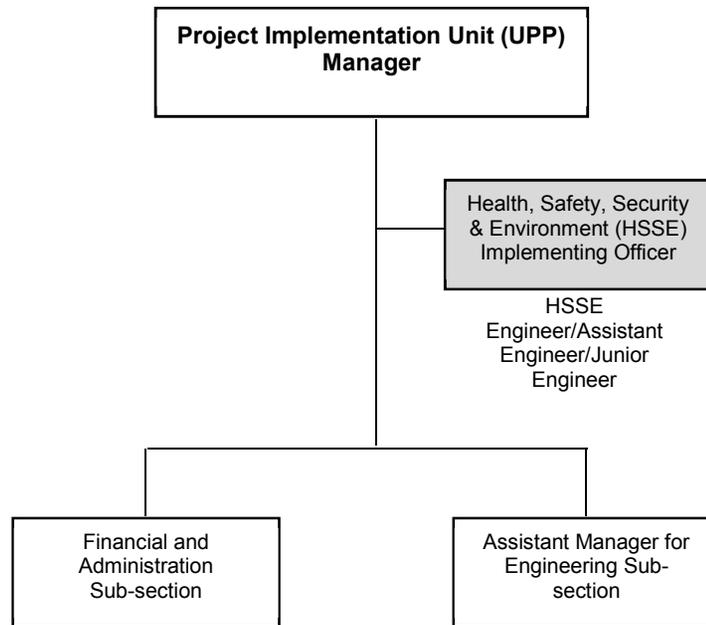
ORGANOGRAM OF PLN OCCUPATIONAL HEALTH, SAFETY, SECURITY AND ENVIRONMENT DIVISION



ORGANOGRAM OF PROJECT CONSTRUCTION UNIT



ORGANOGRAM OF PROJECT IMPLEMENTING UNIT



ORGANOGRAM OF REGIONAL OFFICES

