

Program Safeguard Systems Assessment (Draft)

September 2015

INO: Electricity Grid Strengthening—Sumatra

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ABBREVIATIONS

ADB	– Asian Development Bank
AMDAL	– <i>Analisis Mengenai Dampak Lingkungan</i> (EIA)
AP	– affected person
APKT	– <i>Aplikasi Penyelesaian Keluhan Terpadu</i> (application of integrated complaint solving)
BLHD	– <i>Badan Lingkungan Hidup Daerah</i> (provincial/district Environment Agency)
cm	– centimeter
EGSS	– Electricity Grid Strengthening – Sumatra
EIA	– environmental impact assessment
EMF	– electromagnetic field
EMoP	– environmental monitoring plan
EMP	– environmental management plan
GOI	– Government of Indonesia
IUCN	– International Union for Conservation of Nature
K2	– <i>Keselamatan Ketenagalistrikan</i> (electricity safety)
K3	– <i>Keselamatan dan Kesehatan Kerja</i> (occupational health and safety)
KBA	– key biodiversity area
kV	– kilovolt
m	– meter
m ²	– square-meter
MOER	– Ministry of Environment Regulations
P3BS	– <i>Pusat Penyalur dan Pengatur Beban Sumatera</i> (loan dispatch center of Sumatera)
PAP	– program action plan
PCB	– polychlorinated biphenyls
PLN	– <i>Perusahaan Listrik Negara</i> (State Electricity Corporation)
PLN Decree	– Decree of the Board of Directors of PLN
PSSA	– program safeguard system assessment
RETA	– regional technical assistance
ROW	– right-of-way
SMK3	– <i>Sistem Manajemen Kesehatan dan Keselamatan Kerja</i> (occupational health and safety management system)
SPPL	– <i>Surat Pernyataan Kesanggupan Pengelolaan dan Pemantauan Lingkungan Hidup</i> (letter of commitment for the EMP and EMoP)
SPS	– Safeguard Policy Statement (2009)
TA	– technical assistance
UIP	– <i>Unit Induk Pembangunan</i> (development unit)
UKL/UPL	– <i>Upaya Pengelolaan Lingkungan Hidup / Upaya Pemantauan Lingkungan Hidup</i> (environmental management efforts and environment monitoring efforts)

PROGRAM SAFEGUARD SYSTEMS ASSESSMENT

1. The Electricity Grid Strengthening—Sumatra is proposed to finance a portion of the broader Sumatra grid strengthening program using a results-based lending modality by the Asian Development Bank (ADB). The executing and implementing agency will be PLN (*Perusahaan Listrik Negara* or State Electricity Corporation), a 100% state-owned enterprise. PLN's broader program expenditure for the strengthening and development of Sumatra's power transmission and distribution systems is estimated at \$10,834.5 million from 2015 to 2019 of which the capital expenditure investments costs are \$7,362 million. PLN, with the support of the government, has requested a loan in the amount of \$575 million from ADB's ordinary capital resources (A-loan) and \$25 million from the ASEAN Infrastructure Fund (B-loan) to finance a portion of the program. ADB will initially finance the program for \$600 million (5.5%) while the World Bank will also provide a similar loan of \$500 million (4.6%), both for the same program.

A. Introduction

2. The Program Safeguard System Assessment (PSSA) aims to (i) examine the safeguards system of the Government of Indonesia (GOI) and PLN's safeguards related implementation practices and capacity; and (ii) suggest safeguards program actions where gaps and weaknesses are found. The PSSA was undertaken in partnership with PLN, and builds on existing knowledge of ADB, PLN, and concerned government agencies, as well as on specific analysis carried out during preparation of the program. The PSSA was prepared by ADB based on document reviews, meetings and extensive discussions with PLN, field investigations, and interviews with relevant stakeholders. Based on the assessment, the program may trigger environment and involuntary resettlement safeguards principles of the ADB Safeguard Policy Statement (2009) (SPS), whereas indigenous peoples safeguards principles are not expected to be triggered.

B. Summary Program Description

3. The impact of the program is enhancement of the quality of life in Indonesian society by the sustainable use of electricity as a key driver of increased economic activity. The expected outcome is that the adequacy and reliability of power supply are achieved for Sumatra. This will be achieved through the following outputs over the 2015–2019 period.

- (i) Output 1. Existing transmission system strengthened and expanded
 - Reconductoring of existing 150 kilovolt (kV) transmission lines
 - Extension of 150 kV and 275 kV substations
 - Installation of 150 kV and 275 kV reactors and capacitors
 - Expansion of outgoing 20 kV switchgears at existing 150 kV substations
- (ii) Output 2. Existing distribution system strengthened and expanded
 - Expansion and reinforcement of the medium voltage (20 kV) and low voltage distribution network
 - Installation of distribution transformers
 - Installation of service connections and feeders
 - Installation of customer meter boxes and circuit breakers
- (iii) Output 3. Performance management and implementation improved
 - Acceleration of PLN staff training and certification programs
 - Analysis and resolution of bottlenecks in contract implementation processes

C. Program Environmental and Social Impacts and Risks

4. PLN has a preliminary list of Output 1 activities, although it is subject to further revisions/additions. While the general areas of Output 2 are known, the specific sites will be determined during program implementation. Output 3 is related to improvement of performance management and implementation, and does not involve physical activities.

5. **Environment.** Considering that activities which would be classified as category A in the ADB SPS¹ will not qualify for results-based lending support², the activities located in or directly adjacent to key biodiversity areas (KBAs)³ in addition to national protected areas which include areas of wildlife sanctuaries/reserves, refuge for animals, and cultural heritage, will be excluded from the scope of the program.⁴ The program is categorized B for environment under the ADB SPS inasmuch the impacts are not deemed significant.

6. Construction-related impacts of reconductoring of transmission lines are site-specific because (i) the activities will take place mainly at the height of the conductors using the existing transmission lines to string in the new ones and (ii) there are existing access roads to transmission line towers which are used on a routine basis for inspection and maintenance of the transmission line facilities. Disturbance of wildlife, if any, will be minor and temporary, since there is no permanent alteration of the existing habitat.

7. The program's activities related to extension of substations (including installation of reactors and capacitors and expansion of switchgears) will take place in existing substations premises already owned and managed by PLN. Substations premises are surrounded by boundary fences and have access tracks spacious enough for heavy trucks. Construction-related impacts will be localized within or in the close vicinity of the PLN's premises.

8. Expansion and reinforcement of distribution network (including installation of distribution transformers, service connections and feeders, and customer meter boxes and circuit breakers) will generally take place in urban and community areas already subject to human disturbance and therefore the potential impact on environmentally sensitive locations is not likely.

9. All activities' potential construction-related impacts include disturbance of vegetation, soil erosion, sedimentation, soil/water pollution by oil spill, noise, dust, vibration and generation of waste (including hazardous wastes). Transportation of equipment and materials may generate some noise, dust, and air pollution. Potential impacts during operation stage include trimming of trees within the right-of-way (ROW) of transmission lines and distribution lines (paras. 11 and 13), soil/water contamination by oil spill from transformers at substations, and noise of transformer hum. The risk of transmission line bird collision is considered to be low because the activities in KBAs are excluded from the program (para.5). Potential risks to occupational and community health and safety include electromagnetic field (EMF). All the impacts and risks are

¹ An activity would be classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. See ADB.2009. *Safeguard Policy Statement*. Manila. (para.50)

² Results-Based Lending for programs will exclude activities that would be classified as category A in the Safeguard Policy Statement. See ADB.2013. *Piloting Results-Based Lending for Programs*. Manila. (para.66)

³ KBAs are sites of international importance for the conservation of biodiversity through protected areas and other governance mechanisms. They are identified nationally using simple standard criteria, based on their importance in maintaining species populations, and informed by the International Union for Conservation of Nature (IUCN).

⁴ No transmission lines and substations on the preliminary list shared by PLN (para.4) is located in or directly adjacent to national protected areas although some of existing transmission line or substation assets in Sumatra are already located in or near environmentally sensitive locations.

reversible and site- specific, and can be mitigated and/or managed by PLN's current practices.

10. **Involuntary resettlement.** The program is categorized B for involuntary resettlement under the ADB SPS inasmuch as impacts are not deemed significant.

11. Reconductoring of transmission lines is not likely to trigger involuntary resettlement because the activities will take place mainly within the existing 20-meter (m)-width ROW and will use existing access roads to transmission line towers (para.6). Non-land assets more than 3-m-height in the ROW were removed well before when the existing transmission lines were installed, and trees growing taller than 3 m in the ROW are cleared on regular basis as part of transmission line maintenance, while the land owners of the ROW are allowed to continue to use the land. However, the activities might cause temporary damage on non-land assets (primarily trees and crops): (i) under the conductors mainly accidental in nature during reconductoring activities; and (ii) along access roads to transmission line towers for transportation of heavy equipment such as puller-tensioners and conductor reel stands that will be used at the stringing site.

12. The program's activities related to extension of substations (including installation of reactors and capacitors and expansion of switchgears) will take place in existing substations premises already owned and managed by PLN, and will not trigger any involuntary resettlement. Those activities that require land acquisition, if any, will be excluded from the program.

13. Expansion of the distribution network (including installation of distribution transformers) will require (i) use of no more than 0.2 square-meter (m²) of land for installation of concrete poles;⁵ and (ii) possible removal of non-land assets (primarily trees) located within a distance of 2.5 m of the conductors (within the 7-m-width ROW in case of trees) during their stringing. Distribution transformers are classified into two categories based on mounting location: (i) pad-mounted transformer installed on concrete pads and locked in steel cases (no more than 9 m² is required); and (ii) pole-mounted transformer installed high above on a utility pole. All distribution transformers will be installed on (i) the premises of customers who require power at the primary distribution level which are generally large commercial centers or industrial complexes; (ii) public land;⁶ or otherwise; and (iii) utility poles.

14. Installation of service connections and feeders and customer meter boxes and circuit breakers do not trigger any involuntary resettlement because all service connections and feeders, customer meter boxes and circuit breakers will take place in the premises of billed customers who have initiated the request to be connected and are willing to pay for the services.

15. **Indigenous peoples.** The program is categorized C for indigenous peoples under the ADB SPS inasmuch as no program activity is expected to have impacts on indigenous peoples. Although Sumatra is inhabited by a variety of ethnic groups, the program will not be in areas with indigenous peoples presence. The program will exclude activities that directly or indirectly affect the dignity, human rights, livelihood systems, or culture of indigenous peoples or affect the territories or natural or cultural resources that indigenous peoples own, use, occupy, or

⁵ Diameter of the poles is 40 centimeter (cm) for medium voltage distribution line and 20 cm for low voltage distribution line.

⁶ The number of customers fed by a single pad-mounted distribution transformer varies depending on the number of customers in an area, thus the location of transformers can be selected quite flexibly by adjusting their capacity and coverage area.

claim as an ancestral domain or asset. All existing substation assets in Sumatra are not located in an area (land or territory) occupied, owned, or used by indigenous peoples, and/or claimed as ancestral domain.

D. Safeguard Policy Principles Triggered

16. The ADB SPS has 11 environmental principles and all of them will be triggered by the program.

17. The ADB SPS has 12 involuntary resettlement principles. The program's expected impact is minimal (paras. 10–14). Deterioration of affected persons' (APs) livelihoods and physical relocation are not foreseen and voluntary donation and negotiated settlement will be applied for the expected impacts. Therefore five principles (Principle 3 on improvement or restoration of APs' livelihoods, Principle 4 on assistance for physically relocated APs, Principle 5 on vulnerable groups' living standards, Principles 8 and 9 on resettlement plan and its disclosure) will not be triggered by the program while the rest will be triggered.

E. Diagnostic Assessment

1. Assessment Methodology and Resources

18. The assessment was carried out by:

- a. **Document reviews** on the GOI's laws and regulations pertaining to safeguards, PLN's guidelines and guidance related to activities under the program scope and safeguards, and other PLN's documents such as environmental impact assessment (EIA) reports and monitoring reports related to the program scope. ADB's TAs on country safeguard systems in Indonesia,^{7,8} were referred to in evaluating GOI's safeguards systems;
- b. **Meetings and extensive discussions** with key PLN staff handling safeguards both from headquarters and regional offices/units in Sumatra;
- c. **Field investigations** at existing transmission lines, substations, and distribution lines, and central warehouses for materials and wastes in Medan, Binjai, and Deli Serdang regency (North Sumatra Province) in April 2015 and Pekanbaru (Riau Province) in May 2015; and
- d. **Interviews** with provincial BLHD (Badan Lingkungan Hidup Daerah or provincial/district Environment Agency) in Pekanbaru to validate the environmental assessment and monitoring and reporting procedures related to the program scope. Interviews with community stakeholders in Pekanbaru were also held to gather information on their perspectives about PLN's safeguards implementation practices.

19. Main meetings included (i) a meeting held on 24 April 2015 in Medan with representatives of PLN headquarters and regional units to share the views on the findings during the field visit in North Sumatra province; (ii) a meeting held on 7 May 2015 in Pekanbaru with representatives of PLN headquarters and regional offices/units to obtain their views,

⁷ ADB. 2010. *Technical Assistance for Strengthening and Use of Country Safeguard Systems*. Manila (\$10,000, RETA 7566).

⁸ ADB. 2013. *Technical Assistance for Aligning Asian Development Bank and Country Systems for Improved Project Performance*. Manila. (\$15,000, TA 8548-INO).

suggestions and recommendations on the preliminary assessment findings and proposed actions to address gaps; (iii) a preliminary consultation meeting held on 22 May 2015 in Jakarta with representatives of PLN headquarters to obtain their opinions on the first draft PSSA; and (iv) a wider consultation meeting held on 19 June 2015 in Jakarta convening PLN headquarters and regional offices/units in Sumatra to obtain their views, suggestions, and recommendations on the draft PSSA.

2. Environment

20. The result of the diagnostic assessment of GOI's current system (policy and legal frameworks), PLN practices, and the gap between them and the ADB SPS regarding environment is summarized in Table 1: Safeguards Diagnostic Assessment in Appendix 1.

21. **Policy and legal frameworks.** The EIA in Indonesia is known as AMDAL (*Analisis Mengenai Dampak Lingkungan* or EIA), an assessment report on the significant impacts of business or activities on the environment which is necessary for the process of the decision making regarding the implementation of the business/activities. The AMDAL system was established in 1982 and it has been amended several times. The latest amendment is *Government Regulation No. 27/2012 Regarding Environmental Permit*, which is the derivative of *Law No. 32/2009 Regarding Environmental Protection and Management*.

22. The GOI's environmental laws and regulations, specifically, *Ministry of Environment Regulations (MOERs) No. 05/2012 Regarding Type of Activities Requiring AMDAL*, *No. 16/2012 Regarding Guidelines for Preparation of Environmental Documents*, *No. 17/2012 Regarding Guidelines for Public Participation in AMDAL Process and Environmental Permit* prescribe the requirements of AMDAL, UKL/UPL⁹ (*Upaya Pengelolaan Lingkungan Hidup/Upaya Pemantauan Lingkungan Hidup* or environmental management efforts and environmental monitoring efforts) or SPPL¹⁰ (*Surat Pernyataan Kesanggupan Pengelolaan dan Pemantauan Lingkungan Hidup* or letter of commitment for the environmental management plan [EMP] and environmental monitoring plan [EMoP]), environmental permit process, guideline of environmental documents' preparation, requirement of community involvement, public consultations (socialization) and grievance redress mechanism, and implementation and monitoring of appropriate mitigation measures to address adverse environmental impacts.

23. In addition, *Government Regulation No. 101/2014 Regarding Management of Toxic and Hazardous Waste Substances* regulates the management and disposal procedures for toxic and hazardous waste substances. *Law No. 14/2008 Regarding Public Information* guarantees the provision of correct information to the public as a form of public services. *Law No. 13/2003 Regarding Manpower* and *Government Regulation No. 50/2012 Regarding Practice of Health and Safety Management System* ensure the right of every worker to protection, health and safety to achieve optimal work productivity, and require implementation of a health and safety system. *Presidential Decree No. 32/1990 Regarding Management of Protected Area* and *Law No. 11/2010 Regarding Physical Cultural Resources* regulate the procedures and mechanism for the preservation of protected area and cultural heritage respectively.

⁹ UKL-UPL pertains to the management and monitoring efforts of business/activities that have no significant impacts on the environment, which are necessary for the process of the decision making regarding the implementation of the business/activities.

¹⁰ SPPL is a statement regarding the undertaking to monitor and manage the environmental impact of business/activities which are exempted from the AMDAL or UKL-UPL requirement.

24. **PLN practices.** Based on the assessment of the current PLN practices, as a corporate entity, PLN will adopt and comply with the MOERs on the conduct of environmental assessment in securing the environmental clearance for substations and transmission lines as well as with other laws and regulations related to solid wastes, hazardous wastes, pollution control, forest management, environmental monitoring and reporting, information disclosure, and community involvement. For distribution lines where the environmental impacts are not covered by GOI's legal framework, environmental mitigation measures are specified in *Decree of the Board of Directors of PLN (PLN Decree) No. 473/2010 Regarding Construction Standard for Low Voltage Power Network*¹¹ and *PLN Decree No.606/2010 Regarding Construction Standard for Medium Voltage Power Network*¹² which are then implemented. PLN implements good practices on managing environmental impacts such as meaningful consultation¹³ (socialization), provision of waste storage and segregation, and use of environmentally accepted equipment such as non-polychlorinated biphenyls (PCB) transformers. To address the potential risks on workers' health and safety, SMK3 (*Sistem Manajemen Kesehatan dan Keselamatan Kerja* or occupational health and safety management system) was established by PLN respectively for transmission lines, substations, and distribution lines, which is well implemented.

25. PLN's respective operational units conduct regular monitoring during construction/rehabilitation and operation of each transmission line and substation. While measurements of EMF are conducted twice a year and the services of an external monitor utilized once a year for validation of the internal monitoring results, the measurement of ambient air quality, surface water quality, and noise levels at/around transmission lines and substations is conducted at least once in 2 years (the frequency depends on the EIA result) to comply with both MOERs and SMK3. The quantities of hazardous waste generation are also monitored. Environmental monitoring reports are submitted to BLHD semi-annually. In addition, each PLN regional office/unit conducts public consultation twice a year on health and safety and other environmental and social safeguard issues related to its activities, and report the result to PLN headquarters through a quarterly *K2 K3*¹⁴ *Performance Report* and a quarterly Environmental Performance Report, each of which includes the result of SMK3 implementation monitoring and environmental and social monitoring.

26. PLN has a very effective complaints management system through (i) *Call Center 123* which can be accessed by anyone anywhere in Indonesia through website, email, telephone and social media; (ii) online by using APKT (*Aplikasi Penyelesaian Keluhan Terpadu* or application of integrated complaint solving); and (iii) front line i.e. customer services. PLN regional offices/units immediately act on community complaints including those related to construction impacts, environment, community health and safety, and resettlement issues, by

¹¹ PLN.2010. *Lampiran Keputusan Direksi PT PLN (Persero)/Nomor:473.K/DIR/2010 Buku 3–Standar Konstruksi Jaringan Tegangan Rendah Tenaga Listrik*

¹² PLN.2010. *Lampiran Keputusan Direksi PT PLN (Persero)/Nomor:606.K/DIR/2010 Buku 5–Standar Konstruksi Jaringan Tegangan Menengah Tenaga Listrik*

¹³ Meaningful consultation is a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues. See ADB.2009. *Safeguard Policy Statement*. Manila (para.54).

¹⁴ K2 = *Keselamatan Ketenagalistrikan* or electricity safety, K3 = *Keselamatan dan Kesehatan Kerja* or occupational health and safety

deploying PLN technical service responders.

27. **Gaps identified.** The GOI's environmental screening under *MOER No. 05/2012, Appendix I* mainly uses a prescriptive list with thresholds of proposed activity whereas ADB screens based on the significance of impacts. In addition, there is limited data/information to be cited as a reference for sustainable use and control of biodiversity, although AMDAL is required for business/activities that would be located in or directly adjacent to protected areas which include critical or natural habitats. Thus the program will adopt screening criteria to exclude the activities located in or directly adjacent to protected areas.

28. The GOI legal framework exempts distribution line activities from having an environmental assessment prepared provided they are not located in or directly adjacent to protected areas. However, considering that the scale of the impact is reversible and site-specific and that environmental mitigation measures are implemented following *the PLN Decrees*, the current practices will be sufficient to manage the environmental impacts. According to PLN regional offices/units, no outstanding issues/complaints regarding adverse environmental impact caused by distribution line has ever been reported to date.

29. During field visits of substations, the absence of an oil containment system around operating transformers, which increases the potential for oil spilling out and contaminating the nearby surfaces, was observed at some substations. Provision of having such an oil retention facility was also missing from some AMDALs prepared for the existing substations. The program requires a system to ensure the provision of appropriate oil retention facility.

30. During a field visit of a central warehouse of a distribution system, notable spill of oil from some transformers was observed. There are flaws on the implementation of environmental mitigation measures to manage industrial wastes including hazardous wastes. The management of industrial waste can be improved in terms of avoiding and managing oil spillage and utilizing only a government-recognized third party when disposing hazardous wastes. Appropriate permit for disposal of hazardous wastes is also necessary.

31. Assessments undertaken are of the view that the environment safeguards system currently in place through the GOI's environmental laws and regulations as well as PLN's internal guidelines (*PLN Decrees*) are sufficient to comply with the ADB SPS principles that are triggered. However, PLN can further improve the current practices of waste management and to ensure consistent compliance with the GOI's environmental requirements.

3. Involuntary Resettlement

32. **Policy and legal frameworks.** The key legal instruments currently in force in Indonesia related to involuntary resettlement are *Law No. 02/2012 Regarding Land Acquisition for the Development of Public Interest* and its implementing regulations. These law and regulations cover the land acquisition required for "development of public interest" which is assigned to state-owned enterprises by the government. Land acquisition for the purpose of providing electric power which is not based on the assignment given by the government shall be regulated by *PLN Decree No.0289/2013 Regarding Land Acquisition for the Purpose of Providing*

*Electricity, Operational Costs of Land Acquisition and Operational Cost of Compensation.*¹⁵ PLN Decree No. 0289/2013 covers (i) direct land acquisition to be used for tower siting, major electricity substation, network, transmission, distribution, power plant, office, etc. by giving indemnity; and/or (ii) indirect land acquisition for creating free space by giving compensation on the land crossed by electricity network and transmission and by giving indemnity on the plants and buildings. As for compensation to owners of land, building, trees and other objects under the transmission line of above 35 kV which will be formed as free space, *Ministry of Energy and Mineral Resources Decree No. 38/2013 Regarding Compensation of Assets in the ROW of Transmission Line (the Decree No.38/2013)* establishes procedures, mechanism, and formula of compensation.

33. There is no system (policy and legal frameworks) which covers the resettlement impact caused by the program. *Law No. 02/2012* will not be triggered because the activities under the program are not considered as being assigned by the government. *PLN Decree No. 0289/2013* does not mention use of land (not “direct land acquisition”) for distribution line (concrete poles) and indirect land acquisition for creating “free space” under distribution lines (i.e. removal of non-land assets for stringing of conductors). Neither *PLN Decree No. 0289/2013* nor *No.38/2013* cover the temporary impact caused due to construction/rehabilitation works (i.e. damage on non-land assets caused during reconductoring of transmission line).

34. **PLN practices.** For reconductoring of transmission line, meaningful consultation (socialization) with potential APs is conducted by PLN in conjunction with the contractors prior to civil works. Possible damage is unknown during the consultation stage, because they are mainly accidental in nature during civil works (para.11). On the other hand, potential damage on non-land assets and compensation for the damage are well explained to the potential APs prior to the commencement of civil works to avoid trouble after the occurrence of damage. If there is any damage on non-land assets (primarily trees and crops), the APs are provided with compensation by contractors based on negotiated settlement referring to the local market rate of the assets. The cost of compensation is borne by the contractors as part of overheads, contingency, and profit.

35. For installation of distribution line, PLN starts meaningful consultation (socialization) from the planning stage. The agenda of the consultations includes project plan, cable stringing that may require removal of non-land assets (mainly trees), and agreement from land owners for use of land in case poles need to be located on private land.

36. PLN, in conjunction with contractors, facilitates the planning of the alignment and the design of the distribution line in close coordination with (potential) APs, beneficiaries, and relevant government agencies such as the Ministry of Public Works and Housing (which has authority regarding national roads) and local governments (which have authority regarding regional roads), because the distribution lines are installed along public roads mostly on or close to the border between public land and private land. The alignments of distribution lines including the locations of utility poles can be changed if needed. The distance between the poles varies between 60 m and 80 m for medium voltage networks and 30 m and 40 m for low voltage networks. Even within the same alignment, the conductors are able to avoid disturbance of non-land assets (mainly trees) by setting the height of poles and conductors higher or by replacing

¹⁵ PLN.2013. *Keputusan Direksi PT PLN (Persero)/Nomor:0289.K/DIR/2013 Tentang Pengadaan Tanah Untuk Kepentingan Penyediaan Tenaga Listrik Biaya Operasional Pengadaan Tanah Dan Biaya Operasional Kompensasi Di Lingkungan*

the bare cable with an insulated cable which can go along/through obstacles including trees. This flexibility allows PLN to optimize the alignments of distribution lines including the locations of utility poles taking into full consideration the opinions/requests of the stakeholders. PLN's practice is to minimize the siting of concrete poles on private lands and to avoid disturbance of non-land assets to the maximum extent possible or else to obtain APs' concurrence well in advance during the planning stage for the use of private land for utility poles and removal of non-land assets. In the case of Sumatra, on average, less than 5% of medium voltage utility poles and no more than 50% of low voltage utility poles are located on private land. If a pole with a distribution transformer needs to be located on a private land, a written permission for the use of the land is obtained from the land owners following *PLN Decree No.0605/2010 Regarding Construction Standard for Power Distribution Substation*.¹⁶

37. In case distribution line is installed upon the request of a community, the head of a village submits a statement letter on behalf of the community group (including APs) signed by the community representatives with a written commitment to bear any costs, damages or any other impacts incurred due to the project without any compensation whatsoever. Thus no compensation is provided to the APs. For other cases, if utility poles need to be located on private land except for those with distribution transformers (para.36), then it is sufficient to only obtain a verbal agreement from the landowner. In the event there may be non-land assets which need to be removed, the APs will be provided with a "cutting cost" for the affected trees (in lieu of compensation) or compensation for other non-land assets, if any, only if requested by the APs. The "cutting cost" or compensation, if any, is handled by contractors based on negotiated settlement referring to the local market rates of the assets. The cost of compensation is borne by the contractors as part of the mobilization cost needed for the clearance of the project site. The budget for such compensation is covered by their overheads, contingency, and profit.

38. The grievances related to these resettlement impacts are received and resolved through the comprehensive complaints management system (para.26).

39. **Gaps identified.** The result of the diagnostic assessment of PLN practices, and gap between that and the ADB SPS regarding involuntary resettlement is summarized in Table 1: Safeguards Diagnostic Assessment in Appendix 1.

40. While there is no system (policy and legal frameworks) which covers the resettlement impact triggered by the program (para.33), PLN practices adopted for the program's impact do not imply expropriation based on eminent domain and thus do not trigger the ADB SPS.¹⁷ The distribution line facilities do not need to be at specific locations. Meaningful consultation (socialization) is conducted from the planning stage, allowing the APs to be fully involved in the decision making of the distribution line alignment/design. The APs are fully knowledgeable about the project and its implications and consequences and freely agree to participate. They have the option to agree or disagree with the impact, without adverse consequences being imposed on them either formally or informally by the state.

¹⁶ PLN.2010. *Lampiran Keputusan Direksi PT PLN (Persero)/Nomor:605.K/DIR/2010 Buku 4—Standar Konstruksi Gardu Distribusi Dan Gardu Hubung Tenaga Listrik*

¹⁷ Resettlement is considered involuntary when displaced individuals or communities do not have the right to refuse land acquisition that results in displacement. This occurs in cases where (i) lands are acquired through expropriation based on eminent domain; and (ii) lands are acquired through negotiated settlements, if expropriation process would have resulted upon the failure of negotiation. See ADB.2009. *Safeguard Policy Statement*. Manila (para.5 of Appendix 2)

41. Identified gaps between PLN's practices and the ADB SPS principles revolve around Principles 6 and 12. Negotiated settlements for "cutting cost" or compensation for non-land assets are handled exclusively by contractors, only upon a request from the APs in case of distribution lines, and not monitored by PLN or any third party. While meaningful consultation with the APs is carried out, the information of "adequate" and "fair" price of affected assets may not be provided to the APs during the negotiation, although the rates are negotiated based on the local market rate which are well known by all stakeholders. The negotiation and settlement processes are not documented, while written consensus/permission is obtained for impacts caused by distribution line facilities requested by communities and utility poles with transformers.

42. Based on the field visits both in the urban and rural areas and interviews with some APs, and considering the nature and scale of the impacts caused by the program, it is deemed that the current practices are sufficient to manage the risks and are unlikely to affect the income and livelihood status of the APs. However, PLN needs to monitor the resettlement outcomes and their impacts on the living standards of displaced persons, and take necessary actions if the impacts are found to affect the income and livelihood status of the APs.¹⁸

4. Institutional Arrangements

43. PLN's regional offices are called PLN Wilayah. There are seven Wilayahs in Sumatra which cover; (i) Aceh; (ii) North Sumatra; (iii) West Sumatra; (iv) South Sumatra, Jambi, and Bengkulu; (v) Riau and Riau Islands; (vi) Bangka Belitung; and (vii) Lampung. They are responsible for the construction, operation, and maintenance of distribution lines. PLN regional units in Sumatra are UIPs (*Unit Induk Pembangunan* or development unit), which are responsible for the development of substations and transmission lines and P3BS (*Pusat Penyalur dan Pengatur Beban Sumatera* or load dispatch center of Sumatra) which is responsible for the operation and maintenance of substations and transmission lines. There are two UIPs in Sumatra; (i) UIP II in Medan which covers North Sumatra (Medan), Aceh, Riau, and West Sumatra provinces; and (ii) UIP III in Palembang which covers South Sumatra, Jambi, and Lampung provinces.

44. PLN is a decentralized operation, and therefore there is dedicated safeguards staff not only at headquarters but also in the regional offices/units. The headquarters staff is responsible for policy matters whilst the staff in regional offices/units is responsible for the delivery. At PLN headquarters, the Environmental Planning and Management Unit in Systems Planning Division under the Director of Planning and Development Affiliate, comprising four fulltime staff, handles environmental and social safeguards issues all over the country. Each PLN Wilayah has a safeguard unit, which has two or three staff depending on the number/scale of projects allocated, and oversees the compliance of safeguards related laws/regulations and PLN guidance. Each PLN UIP also has a safeguard team, which is consisting of about 10 staff members, and handles environment and land acquisition issues. In some cases, to accelerate the implementation of safeguards measures, PLN establishes a project implementation unit for specific projects. At PLN P3BS, the safeguard issues are handled by staff in the main section, because P3BS is responsible only for operation and maintenance, and is rarely tasked to

¹⁸ Involuntary resettlement principle 6 states "Develop procedures in a transparent, consistent, and equitable manner if land acquisition is through negotiated settlement to ensure that those people who enter into negotiated settlements will maintain the same or better income and livelihood status." See ADB.2009. *Safeguard Policy Statement*. Manila (page.17)

handle any environmental or land acquisition issues.

45. PLN has been implementing many power sector projects including transmission lines, substations, and distribution lines, some of which are funded by multilateral agencies for over 20 years now. Therefore PLN has accumulated adequate knowledge and experience in handling environmental and social safeguards issues. To enhance their capacity, PLN staff has opportunities to attend trainings (including training on environmental and resettlement safeguards) provided by the Education and Training Unit of PLN Corporate University. All staff is entitled to select and attend the trainings twice per year. In addition, a number of PLN staff has been enhancing their understanding of social and environmental safeguards by participating in external trainings conducted by ADB.¹⁹ Some PLN staff also participates actively in the discussion on equivalence assessment of country safeguard systems for resettlement and environmental safeguards conducted under ADB TA 8548-INO.²⁰

46. **Weaknesses in the implementation effectiveness of the safeguard system.** On the basis of this assessment, PLN's capacity is deemed adequate. However, during the field visits, weak application of waste management was found to be an outcome of low level of awareness among the staff about the related regulatory framework and guidelines (para.30). Robust in-house refresher trainings are to be conducted annually for the staff from PLN headquarters and regional offices/units in Sumatra to raise the safeguard requirements awareness and ensure their proper implementation. Focal persons for environmental and social safeguards of the program will also be assigned at headquarters and each office/unit for the compliance of the safeguard program actions.

F. Safeguard Program Actions

47. Given the assessment and considering the scope and scale of the impacts and the risks, seven program actions are proposed to address the identified gaps and weakness (Table 1). The detailed safeguard program actions with their indicator/target, responsibility, timeframe, and budget resource are presented in Table 2: Safeguards Program Actions in Appendix 1. PLN has adequate capacity to implement these actions, and agreed to implement these. Implementation of these actions will be monitored by ADB during program implementation.

¹⁹ The external trainings include; (i) training on involuntary resettlement in 2010 through *Technical Assistance for Training Involuntary Resettlement and Capacity Development* (RETA 6425); (ii) training on social safeguard in land acquisition for the development of public interest conducted in 2014 through *Subproject: Capacity Development for Social Safeguard Preparation and Implementation in Water Resource Management and Energy in Indonesia* under TA 7566-INO (footnote 7); (iii) discussion and workshop for strengthening AMDAL system through *Subproject: Strengthening Capacity of Indonesia's Environment Impact Assessment (AMDAL) System* under TA 7566-INO.

²⁰ Footnote 8.

Table 1: Safeguards Program Actions

Actions	Responsible Agencies ^a	Time Frame
1. PLN HQ issues a guidance on the screening criteria for selecting locations and components to ensure that the program will exclude: <ul style="list-style-type: none"> (a) activities that would be classified as environment category A in the ADB SPS; (b) activities related to extension of substations, installation of reactors and capacitors and expansion of switchgears that require land acquisition; and (c) activities that directly or indirectly affect the dignity, human rights, livelihood systems, or culture of indigenous peoples or affect the territories or natural or cultural resources that indigenous peoples own, use, occupy, or claim as an ancestral domain or asset. PLN Wilayahs, UIPs, and P3BS submit to PLN HQ a list of activities excluded from the program following the guidance issued through this program action annually.	DIV SIS DIV DIS SUM DIV KONJAR DIV TRS JBS PLN Wilayahs, UIPs P3BS	Prior to the first disbursement and 2016 onwards
2. Equip transformers with oil retention facilities at substations extended under the program.	UIPs	2016 onwards
3. Improve the management of industrial waste.	PLN Wilayahs	Within a year of program commencement
4. Monitor the resettlement ^b outcomes and their impacts on the living standards of displaced persons through reviewing complaints received and conducting consultations with community, and take necessary actions if the impacts are found to affect the income and livelihood status of the APs. The implementation of this program action will be reported to relevant divisions semi-annually.	DIV SIS DIV TRS JBS DIV DIS SUM PLN Wilayahs P3BS	2016 onwards
5. Appoint focal persons for implementing environmental and social safeguards activities.	DIV SIS PLN Wilayahs DIV DIS SUM DIV TRS JBS UIPs P3BS	4 th quarter 2015
6. Build capacities of relevant field personnel at related Divisions, Wilayahs, UIPs, P3BS, PIU, and contractors, on environmental and social safeguards focusing on the safeguards program actions.	DIV SIS PLN Wilayahs DIV DIS SUM DIV TRS JBS UIPs P3BS	Every 4 th quarter starting from 2015 onwards
7. Monitor and ensure the implementation of program actions 2 and 3 and report the results quarterly to DIV SIS through the <i>Environmental Performance Report</i> .	DIV SIS PLN Wilayahs UIPs	2016 onwards

DIVKONJAR = Transmission Network Construction Division, DIVDISSUM = Sumatra Distribution Division, DIVSIS = System Planning Division, DIVTRSJBS = Java, Bali, and Sumatra Transmission Division, HQ = headquarters, PLN = State Electricity Corporation, P3BS = Load Dispatch Center of Sumatra, UIP = Development Unit, Wilayah = regional office

^a The agencies listed herein subject to revision in light of PLN's reorganization of 7 August 2015.

^b Resettlement means removal/damage of non-land assets and use of private land for installation of concrete poles.

Source: Asian Development Bank.

Additional Information to Program Safeguard Systems Assessment

September 2015

INO: Electricity Grid Strengthening—Sumatra

1. This document supplements the Program Safeguard Systems Assessment for the Electricity Grid Strengthening—Sumatra program, and includes; (i) Table 1: Safeguards Diagnostic Assessment; (ii) Table 2: Safeguards Program Actions; and (iii) Figure: Map of Protected Areas and Key Biodiversity Areas (KBAs) in Sumatra.

Table 1: Safeguards Diagnostic Assessment

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
Environment		
<p>Principle 1. Use a screening process for each proposed project, as early as possible, to determine the extent and type of environmental assessment so that appropriate studies are undertaken commensurate with the significance or potential impacts and risks.</p>	Yes	<p><System> <i>MOER No. 05/2012 Regarding Type of Activities Requiring AMDAL</i> is a prescriptive screening process used to determine whether projects are required to conduct an AMDAL and secure an environmental clearance from the environmental agency. Under <i>MOER No. 05/2012</i>, AMDAL is required for business/activities listed in its <i>Appendix I</i> which include transmission line (above 150 kV) and substation (above 150 kV) but not for distribution line. In addition, <i>MOER No. 05/2012, Article 4</i> requires AMDAL for business/activities which; (a) have the scale/magnitude smaller than those listed in <i>Appendix I</i>; and/or (b) not listed in <i>Appendix I</i> but have a significant impact on the environment. These business/activities shall be determined based on: (a) scientific considerations regarding environmental capacity and its acceptability; and (b) the significance of environmental impact regarding the type of local ecosystem. <i>MOER No. 05/2012, Article 3</i> also requires AMDAL for business/activities in or directly adjacent to protected areas which are listed in <i>MOER No. 05/2012, Appendix III</i>. For rehabilitation or improvement of existing transmission line and substation, <i>Government Regulation No. 27/2012 Regarding Environmental Permit, Article 50</i>, requires the project proponent to present the proposed modification to BLHD which will determine whether the modifications will result to significant impacts and whether new/updated environment document (AMDAL or UKL/UPL) will be required. If found necessary, BLHD will evaluate the new/updated environment document and issue an amendment of the environmental clearance.</p> <p><Practices> PLN UIPs, being the PLN focal units for planning and construction of transmission line and substation, follow the screening criteria as stipulated in <i>MOER No. 05/2012</i>. For reconductoring of transmission line and extension of substation, PLN UIPs examine the scope of environment documents which were prepared when the existing transmission line and substation were installed. If the reconductoring or extension is deemed to be out of the scope described in the original environment documents, PLN presents the proposed modification to BLHD for their determination on necessary procedure. The AMDAL or</p>

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
		<p>UKL/UPL with EMP is to be submitted to BLHD as required. In general, new/updated AMDAL will not be required for reconductoring of transmission line, because the activity is covered by the original AMDAL of existing transmission line as part of operation and maintenance activity.</p> <p>For distribution line, some PLN Wilayahs prepare SPPL and submit it to BLHD on voluntary basis.</p> <p><Gap> The screening process in <i>MOER No. 05/2012</i> is not equivalent to the ADB SPS requirements since ADB's screening is based on the significance of subproject's environmental impacts and not based on a prescriptive list of activities and thresholds.</p>
<p>Principle 2. Conduct an <u>environmental assessment</u> for each proposed project to identify potential direct, indirect, cumulative and induced impacts and risks to physical, biological, socioeconomic (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues), and physical cultural resources in the context of the project's area of influence. Assess potential transboundary and global impacts, including climate change. Use strategic environmental assessment where appropriate.</p>	Yes	<p><System> The scope and components to be studied for AMDAL are stipulated by <i>MOER No.16/2012 Regarding Guidelines for Preparation of Environmental Documents</i>. AMDALs need to cover potential direct, indirect, cumulative and induced impacts and risks. The components to be studied include geo-physical-chemical, biological, and social-economic-cultural impacts.</p> <p><Practices> PLN conducts environmental assessment and prepare AMDALs for the installation of transmission lines (above 150 kV) and substations (above 150 kV) following <i>MOER No.16/2012</i>. For reconductoring of transmission line and extension of substation, PLN UIPs conduct an additional environmental assessment if required by the decision of BLHD (see the <Practices> of Principle 1. above).</p> <p><Gap> The GOI legal framework exempts distribution line projects from environmental assessment requirement. Therefore an environmental assessment is not conducted for installation of distribution line.</p>
<p>Principle 3. Examine alternatives to the project's location, design, technology, and components and their potential environmental and social impacts and document the rationale for selecting the particular alternative proposed. Also consider the no project alternative.</p>	Yes	<p><System> The examination of alternatives is covered under <i>MOER No. 16/2012, Appendix I</i>, whereby environmental assessment should consider other alternatives such as technology, equipment used, capacity, technical specification, outline, operational duration, time, location, among others.</p> <p><Practice> Alternatives on location, route, equipment, capacity, technical specifications and other design considerations are examined during selection and planning of subprojects by PLN, regardless of legal requirement, for transmission line, substation, and distribution line.</p> <p><Gap> N/A</p>

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
<p>Principle 4. Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts by means of environmental planning and management. <u>Prepare an EMP</u> that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Key considerations for EMP preparation include mitigation of potential adverse impacts to the level of no significant harm to third parties, and the polluter pays principle.</p>	Yes	<p><System> The identification of environmental impacts and preparation of the EMP and EMoP to address adverse impacts are prescribed in <i>MOER No. 16/2012, Appendix III</i>. The EMP and EMoP form parts of AMDAL document, and their scope comprises of efforts to prevent, control, and manage significant and negative impacts to environment, as well as enhance the positive impact as a result of the business/activities. The <u>EMP</u> needs to explain how the potential impacts will be managed with the information of (i) environmental impact; (ii) source of the impact; (iii) successful indicator, form, location, period and institution of environmental management. The <u>EMoP</u> needs to include the information of (i) impacts to be monitored; (ii) monitoring form; and (iii) institutional arrangement of the monitoring. The EMoP should be economically feasible considering the sustainability of the monitoring throughout the life of the business/activities.</p> <p><Practices> EMP and EMoP are prepared as required by <i>MOER No. 16/2012</i> for all <u>transmission line</u> and <u>substation</u> projects handled by PLN. The EMP includes the impacts to be managed, sources of impact, mitigation measures, location, schedule, and institutional arrangement. For <u>distribution line</u>, <i>Decree of the Board of Directors of PLN (PLN Decree) No. 473/2010 Regarding Construction Standard for Low Voltage Power Network</i> and <i>PLN Decree No.606/2010 Regarding Construction Standard for Medium Voltage Power Network</i> include the mitigation measures to be taken against environmental impacts caused by distribution line during construction and operation stages. The mitigation measures include proper handling of excavated soil, appropriate selection of vehicle for transportation of poles, recovery of excavation site, adequate distance from other objects (1-6 m depending on the kind of the objects), etc. The contract of the civil works specifies the compliance of <i>PLN Decrees No. 473/2010</i> and <i>No. 606/2010</i>. Sample SPPL of distribution line (see the <Practices> of Principle 1. above) shows the commitment of PLN Wilayah to conduct proper trimming of trees and to conduct consultation (socialization) with affected persons during line installation and maintenance.</p> <p><Gap> N/A</p>
<p>Principle 5. <u>Carry out meaningful consultation</u> with affected people and facilitate their informed participation. Ensure women's participation in consultation. Involve stakeholders, including</p>	Yes	<p><System> <i>MOER No. 16/2012, Appendix I</i> and <i>MOER No. 17/2012 Regarding Guidelines for Public Participation in AMDAL Process and Environmental Permit</i> prescribe the requirements for community involvement and public consultation (socialization). For projects requiring AMDAL, public consultation from the AMDAL TOR preparation stage is mandatory. The community involvement during the process</p>

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
<p>affected people and concerned non-government organizations, early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout project implementation as necessary to address issues related to environmental assessment. <u>Establish a grievance redress mechanism</u> to receive and facilitate resolution of the affected people's concerns and grievances regarding the project's environmental performance.</p>		<p>of AMDAL and the environmental permit should be based on the principles; (i) the provision of transparent and complete information; (ii) position of equality among the parties involved; (iii) fair and prudent dispute settlement; and (iv) coordination, communication and cooperation among the concerned parties.</p> <p><i>MOER No. 17/2012</i> also mentions the grievance redress procedure for community complaints against a project. The procedure also outlines the methods and timeline for resolving complaints.</p> <p><Practice> For reconductoring of transmission line and extension of substation, meaningful consultation (socialization) is conducted following <i>MOER No. 16/2012</i> and <i>MOER No. 17/2012</i>. The affected stakeholders to be consulted are determined by BLHD.</p> <p>Especially for reconductoring of transmission line and installation of distribution line, meaningful consultation (socialization) and coordination with affected communities are conducted by PLN and contractors prior to civil works regardless of legal requirement. The agenda of the consultation includes project plan and safety.</p> <p>Prior to the formal public consultations, the project information is disclosed to community through various means such as media and/or posting at village offices. The information is further presented during public consultations.</p> <p>GRM has been developed by PLN through; (a) <i>Call Centre 123</i>; (b) online by using APKT; and (c) front line i.e. customer services which will also be used for the program. The complaints to the <i>Call Centre 123</i> would be recorded and divided in three subjects: 1) Technical, 2) Customer services (commercial), and 3) Other (including environmental and social safeguards matters).</p> <p><Gap> N/A</p>
<p>Principle 6. <u>Disclose a draft environmental assessment (including the EMP)</u> in a timely manner, before project appraisal, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. <u>Disclose the final environmental assessment</u>, and its updates if any, to affected people and other stakeholders.</p>	Yes	<p><System> <i>Government Regulation No. 17/2012</i> requires the disclosure of environmental documents (both draft and final versions including EMP) to stakeholders including affected people.</p> <p>Before preparing the draft environmental documents, a project proponent requests environmental clearance to the MOEF by providing general concept of its business/activities as well as proposed impact mitigation measures. Then the MOEF, through BLHD, announces the request with information of; (i) name/address of applicant; (ii) type, scale, and location of the business/activities; and (iii) where people can obtain the AMDAL/UKL/UPL. The announcement is delivered for 10 working days in Bahasa Indonesia in a form of (i) printed media such as national/local newspaper, (ii) announcement board that can be accessed by the public at central, provincial and/or municipal level, and (iii) other media</p>

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
		<p>such as brochure, pamphlet, banner, or electronic media through television, website, social media, text message, and/or radio.</p> <p>When the MOEF issues a final environmental permit after receiving the final environmental documents from the project proponents, the MOEF, through BLHD and within 5 days after the issuance, disclose the documents and announces the issuance in a form of mass media and/or multimedia including website that can be accessed by the public effectively and efficiently.</p> <p>Under <i>Law No. 14/2008 Regarding Public Information, Chapter 1, Article 4</i>, everyone has the right to obtain public information, attend public meetings to obtain public information, obtain copies of public information through an application, and/or disseminate public information.</p> <p><Practice> Project information and draft and final versions of the environmental assessment documents of transmission lines and substations are disclosed following <i>MOER No. 17/2012</i>. Project details are further presented during public consultations.</p> <p><Gap> For distribution line, environmental assessment is not disclosed because the assessment is not required (see the <Practices> of Principle 1. above).</p>
<p>Principle 7. <u>Implement the EMP and monitor its effectiveness.</u> Document monitoring results, including the development and implementation of corrective actions, and <u>disclose monitoring reports.</u></p>	Yes	<p><System> The EMP and EMoP form part of AMDAL and UKL/UPL as required under <i>MOER No. 16/2012</i> (see the <System> of Principle 4. above). Following <i>Government Regulation No. 27/2012</i>, a project proponent, as an environmental permit holder, is obliged to; (i) implement EMP and EMoP; (ii) prepare and submit to BLHD a monitoring report semi-annually, and (iii) provide guarantee fund for the restoration of environment. The monitoring report needs to include location, frequency, period, method of monitoring as well as collected monitoring data which needs to be analyzed by accredited environmental laboratories.</p> <p>The public has access to the results of monitoring from BLHD in accordance with <i>Law No. 14/2008</i>.</p> <p><Practices> (See para.25 of PSSA) For transmission line and substation, PLN UIPs, P3BS, and Wilayah conduct regular monitoring during construction and operation stages, and submit copies of the quarterly environmental monitoring reports to PLN headquarters. Reports are also submitted to BLHD every semester (twice a year). The EMF levels, ambient air, surface water quality, noise levels along affected areas of transmission line and substation, and the hazardous waste generation quantities are monitored.</p> <p>PLN Wilayah, being in charge of the construction and</p>

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
		<p>operation of distribution line, has a supervisor handling matters related to health and safety whose scope of work includes the monitoring of the compliance of <i>the PLN Decrees</i> (see the <Practices> of Principle 4. above). The result of the monitoring is summarized in a quarterly <i>K2 K3 Performance Report</i> and Environmental Performance Report submitted to PLN headquarters.</p> <p>The environmental documents including monitoring reports are disclosed when requested by stakeholders including communities.</p> <p><Gap> N/A</p>
<p>Principle 8. Do not implement project activities in areas of critical habitats, unless (i) there are no measureable adverse impacts on the critical habitat that could impair its ability to function, (ii) there is no reduction in the population of any recognized endangered or critically endangered species, and (iii) any lesser impacts are mitigated. <u>If a project is located within a legally protected area, implement additional programs to promote and enhance the conservation aims of the protected area. In an area of natural habitats, there must be no significant conversion or degradation</u>, unless (i) alternatives are not available, (ii) the overall benefits from the project substantially outweigh the environmental costs, and (iii) any conversion or degradation is appropriately mitigated. Use a precautionary approach to the use, development and management of renewable natural resources.</p>	Yes	<p><System> GOI has ratified international regulation on biodiversity through <i>Law No. 05/1994 Regarding United Nation Convention Regarding Biodiversity</i> which requires the environmental assessment of proposed projects likely to have significant impacts on biological diversity with a view of avoiding or minimizing such effects. <i>MOER No. 05/2012, Article 3</i> requires AMDAL for activities in or directly adjacent to protected areas which are listed in <i>MOER No. 05/2012, Appendix III</i> which includes areas of wildlife sanctuaries/reserves and refuge for animals. <i>Presidential Decree No. 32/1990 Regarding Management of Protected Area, Article 37</i> stipulates that; (i) in protected areas, cultivation, which interferes with the environmental function of the protected area, is prohibited; and (ii) in nature reserves and areas of cultural heritage, cultivation, which alters the landscape, land use conditions, natural ecosystem, or environmental function of the nature reserves or cultural heritage, is prohibited. If AMDAL indicates that cultivation activities interfere with the function of protection, it should not be developed, and function as a protected area should be gradually restored.</p> <p><Practices> To the extent possible PLN adopts the precautionary approach when identifying locations of project components. In case there are subprojects that would be located in or directly adjacent to protected area, the said subproject will be required under <i>MOER No. 05/2012</i> to conduct extensive AMDAL and to develop conservation programs to avoid the degradation of the environment. In case AMDAL indicates that the project interferes with the function of protection, it should not be developed. distribution lines are all in community areas, and not likely to be located in protected areas, however, in case they need to be installed in or directly adjacent to protected area, AMDAL clearance will be required.</p> <p><Gap> <i>MOER No. 29/2009 Regarding Guidelines for Biodiversity Conservation outlines policies, sustainable use and control of</i></p>

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
		biodiversity. However, this regulation has not been applied because there is limited biodiversity data/information to be cited as a reference.
<p>Principle 9. <u>Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges, including direct and indirect greenhouse gases emissions, waste generation, and release of hazardous materials from their production, transportation, handling, and storage. Avoid the use of hazardous materials subject to international bans or phase-outs. Purchase, use, and manage pesticides based on integrated pest management approaches and reduce reliance on synthetic chemical pesticides.</u></p>	Yes	<p><System> <i>Law No. 32/2009 Regarding Environmental Protection and Management, Article 3</i> mentions that EMP is intended to prevent Indonesia's territory from the environmental pollution and/or damages, control the natural resources usage and establish the sustainable development. In order to preserve environmental function, pollution and environmental damage shall be controlled through prevention, mitigation, and recovery. <i>MOER No.16/2012</i> states that the principle of prevention of pollution and prevention of damage to the environment needs to be considered through environmental assessment and applied in the context of environmental management. <i>Government Regulation No. 101/2014 Regarding Management of Toxic and Hazardous Waste Substances</i> regulates the proper management of hazardous waste covering; (i) method of identifying, reducing, storing, collecting, transporting, utilizing, processing, and hoarding hazardous wastes; (ii) risk mitigation and emergency responses to address environmental pollution caused by hazardous waste.</p> <p><Practices> Environmentally acceptable standards are being adopted by PLN. In compliance with the Government's hazardous waste regulations, PLN is storing used oil and batteries in warehouse and will commission the services of Government-recognized third party to dispose of these materials. Certification from the government of the third party is being required before the waste materials can be collected.</p> <p><Gap> An oil containment system around operating transformers was missing at some substations as well as in their AMDALs (See para.29 of PSSA). There are flaws on the implementation of environmental mitigation measures to manage industrial wastes including hazardous wastes (See paras.30 and 46 of PSSA).</p>
<p>Principle 10. <u>Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease. Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize adverse</u></p>	Yes	<p><System> <i>Law No. 13/2003 Regarding Manpower</i> states that every company has the obligation to practice health and safety management and to integrate them into the company management system. Implementation of health and safety system had been issued by <i>Government Regulation No. 50/2012 Regarding Practice of Health and Safety Management System</i>.</p> <p><Practices> To address the potential risks on workers' and communities'</p>

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
impacts and risks to the H&S of local communities.		health and safety, health and safety guidelines respectively for transmission line, substation, and distribution line are in place, and being implemented. <Gap> N/A
Principle 11. <u>Conserve physical cultural resources</u> and avoid destroying or damaging them by using field-based surveys that employ qualified and experienced experts during environmental assessment. Provide for the use of “chance find” procedures that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.	Yes	<System> <i>MOER No. 05/2012, Article 3</i> requires AMDAL for activities in or directly adjacent to protected areas which are listed in <i>MOER No. 05/2012, Appendix III</i> which includes areas of cultural heritage. The definition, criteria, procedures and mechanism for cultural heritage preservation is regulated in <i>Law No. 11/2010 Regarding Physical Cultural Resources</i> . <Practices> During identification of site locations, physical cultural resources (mosques, burial sites, historical sites, etc.) are avoided. In case there are subprojects that would be located in or directly adjacent to areas of cultural heritage, an extensive AMDAL is conducted to develop conservation programs to avoid the degradation of the cultural resources. distribution lines are all in community areas, and not likely to affect cultural resources. <Gap> N/A
Involuntary Resettlement^a		
Principle 1. Screen the project early on to identify past, present, and future involuntary resettlement impacts and risks. Determine the scope of resettlement planning through a survey and/or census of displaced persons, including a gender analysis, specifically related to resettlement impacts and risks.	Yes	<Practices> The potential IR impact of the program activities is limited to (i) damage on non-land assets (primarily trees and crops) under the transmission line conductor and along access roads to transmission line towers caused by <u>reconductoring of transmission line</u> ; (ii) use of no more than 0.2 m ² of land for installation of concrete utility poles; and (ii) removal of non-land assets (primarily trees) existing beyond a distance of 2.5 m below from the conductors (in the 7-meter-width ROW in case of trees) for stringing of conductors. <Gap> N/A
Principle 2. Carry out meaningful consultations with affected persons, host communities, and concerned nongovernment organizations. Inform all displaced persons of their entitlements and resettlement options. Ensure their participation in planning, implementation, and	Yes	<Practices> PLN's practices promote meaningful consultation (socialization) with stakeholders including APs (see the <Practices> of Environmental Principle 5. above). For reconductoring of transmission line, possible damage on non-land assets and compensation for the damage are explained in advance of the civil works. For distribution line, consultation (socialization) with APs will be conducted in close coordination with relevant local government agencies because the distribution line will be constructed along the public roads. The agenda of the consultations includes project plan, cable stringing that may

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
<p>monitoring and evaluation of resettlement programs. Pay particular attention to the needs of vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children, and Indigenous Peoples, and those without legal title to land, and ensure their participation in consultations. Establish a grievance redress mechanism to receive and facilitate resolution of the affected persons' concerns. Support the social and cultural institutions of displaced persons and their host population. Where involuntary resettlement impacts and risks are highly complex and sensitive, compensation and resettlement decisions should be preceded by a social preparation phase.</p>		<p>require cutting trees, and obtainment of agreement from land owners for use of land in case poles need to be located on private land.</p> <p>The APs complaint are brought to PLN through (a) <i>Call Center 123</i>; (b) online by using APKT; and (c) front line (see the <Practices> of Environmental Principle 5. above).</p> <p><Gap> N/A</p>
<p>Principle 3. Improve, or at least restore, the livelihoods of all displaced persons through (i) land-based resettlement strategies when affected livelihoods are land based where possible or cash compensation at replacement value for land when the loss of land does not undermine livelihoods, (ii) prompt replacement of assets with access to assets of equal or higher value, (iii) prompt compensation at full replacement cost for assets that cannot be restored, and (iv) additional revenues and services through benefit sharing schemes where</p>	No	<p><Practices> The impact is minimal (see the <Practices> of Principle 1. above). Deterioration of APs' livelihoods is not foreseen.</p> <p><Gap> N/A</p>

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
possible.		
<p>Principle 4. Provide physically and economically displaced persons with needed assistance, including the following: (i) if there is relocation, secured tenure to relocation land, better housing at resettlement sites with comparable access to employment and production opportunities, integration of resettled persons economically and socially into their host communities, and extension of project benefits to host communities; (ii) transitional support and development assistance, such as land development, credit facilities, training, or employment opportunities; and (iii) civic infrastructure and community services, as required.</p>	No	<p><Practices> There is no relocation (see the <Practices> of Principle 1. above).</p> <p><Gap> N/A</p>
<p>Principle 5. Improve the standards of living of the displaced poor and other vulnerable groups, including women, to at least national minimum standards. In rural areas provide them with legal and affordable access to land and resources, and in urban areas provide them with appropriate income sources and legal and affordable access to adequate housing.</p>	No	<p><Practices> (see the <Practices> of Principle 3. above)</p> <p><Gap> N/A</p>
<p>Principle 6. Develop procedures in a transparent, consistent, and equitable manner if land acquisition is through negotiated settlement to ensure that those people who enter into negotiated</p>	Yes	<p><Practices> The impact of the program activities is not likely to affect the income and livelihood status of the APs (see the <Practices> of Principle 1. above). For reconductoring of transmission line, compensation for the damage on non-land assets is provided by contractors based on negotiated settlement.</p>

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
settlements will maintain the same or better income and livelihood status.		<p>For distribution line, contractors provide “cutting cost” or compensation for the other non-land assets with the APs based on negotiated settlement only upon a request. Written consensus/permission is obtained only for impacts caused by distribution line facilities requested by communities and utility poles with transformers.</p> <p><Gap> Negotiated settlements for affected trees/crops are handled exclusively by contractors, and PLN is not involved in the settlement. Document pertaining to the settlements is not necessarily issued. For distribution line, compensation of affected trees is provided only when the APs request. The information of “adequate” and “fair price” of affected assets may not be provided to the APs during the negotiation.</p>
Principle 7. Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of nonland assets.	Yes	<p><Practices> APs who can demonstrate that the non-land assets belong to them are deemed as the owners of the assets regardless of the titles to land or any recognizable legal rights to land.</p> <p><Gap> N/A</p>
Principle 8. Prepare a resettlement plan elaborating on displaced persons’ entitlements, the income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget, and time-bound implementation schedule.	No	<p><Practices> No resettlement plan is prepared.</p> <p><Gap> N/A (Voluntary donation and negotiated settlement are applied.)</p>
Principle 9. Disclose a draft resettlement plan, including documentation of the consultation process in a timely manner, before project appraisal, in an accessible place and a form and language(s) understandable to affected persons and other stakeholders. Disclose the final resettlement plan and its updates to affected persons and other stakeholders.	No	
Principle 10. Conceive and execute involuntary	Yes	<p><Practices> IR procedures are part of development projects. The cost of</p>

Principles	Triggered Yes / No	Current system (policy and legal frameworks) / practices and gap between them and the ADB SPS
resettlement as part of a development project or program. Include the full costs of resettlement in the presentation of project's costs and benefits. For a project with significant involuntary resettlement impacts, consider implementing the involuntary resettlement component of the project as a stand-alone operation.		compensation, if any, is borne by the contractors as part of the cost of engineering contract. The budget for such compensation is covered by overheads, contingency, or profit, thus constitutes the projects' overall budget. <Gap> N/A
Principle 11. Pay compensation and provide other resettlement entitlements before physical or economic displacement. Implement the resettlement plan under close supervision throughout project implementation.	Yes	<Practices> For reconductoring of transmission line, compensation is paid only if and after the damage occurs (mainly accidental in nature), because possible damage is unknown before the civil work. For distribution line, agreement on land use and cutting trees, if required, is obtained, and "cutting cost" for affected trees/crops, if any, is provided before the commencement of civil works. <Gap> N/A
Principle 12. Monitor and assess resettlement outcomes, their impacts on the standards of living of displaced persons, and whether the objectives of the resettlement plan have been achieved by taking into account the baseline conditions and the results of resettlement monitoring. Disclose monitoring reports.	Yes	<Practices> Settlements for affected trees/crops are handled exclusively by contractors, and not monitored by PLN or any third party, although PLN may acknowledge the agreement over the impacts caused by distribution line facilities requested by communities and utility poles with transformers. <Gap> Monitoring is not conducted.

AMDAL = Analisis Mengenai Dampak Lingkungan or environmental impact assessment, AP = affected person, APKT = Aplikasi Penyelesaian Keluhan Terpadu or application of integrated complaint solving, BLHD = Badan Lingkungan Hidup Daerah or provincial/district Environment Agency, EMP = environmental management plan, EMoP = environmental monitoring plan, EMF = electromagnetic field, GOI = Government of Indonesia, kV = kilovolt, MOEF = Ministry of Environment and Forestry, MOER = Ministry of Environment Regulation, PLN = Perusahaan Listrik Negara or State Electricity Corporation, P3BS = Pusat Penyalur dan Pengatur Beban Sumatera or loan dispatch center of Sumatera, TOR = terms of reference, UIP = Unit Induk Pembangunan or development unit, UKL/UPL = Upaya Pengelolaan Lingkungan Hidup/Upaya Pemantauan Lingkungan Hidup or environmental management efforts and environment monitoring efforts.

^a There is no system (policy and legal frameworks) which covers the involuntary resettlement impact triggered by the program.

Source: ADB.2009. Safeguard Policy Statement. Manila. pp.16-18; Diagnostic assessment of GOI's current system and PLN practices.

Table 2: Safeguards Program Actions

Proposed Action	Indicator/Target	Responsible Agencies ^a	Timeframe	Budget Resource
Screening				
<p>(i) PLN headquarters issues a guidance on the screening criteria for selecting locations and components to ensure that the program will exclude:</p> <p>a. activities that would be classified as environment category A in the Asian Development Bank Safeguard Policy Statement (2009). Considering the anticipated scope and scale of the impacts, activities located in or directly adjacent to Key Biodiversity Areas^b in addition to protected areas which are listed in <i>Ministry of Environment Regulation No. 05/2012, Appendix III</i> will be classified as environment category A^c;</p> <p>b. activities related to extension of substations (including installation of reactors and capacitors and expansion of switchgear) that require land acquisition; and</p> <p>c. activities that directly or indirectly affect the dignity, human rights, livelihood systems, or culture of indigenous peoples or affect the territories or natural or cultural resources that indigenous peoples own, use, occupy, or claim as an ancestral domain or asset.^d</p> <p>PLN Wilayhas, UIPs and P3BS submit to PLN headquarters a list of activities excluded from the program following the guidance issued through this program action annually.</p>	Guidance on safeguard screening criteria for the program issued	PLN HQ (DIVSIS, DIVDISSUM, DIVKONJAR, DIVTRSJBS), Wilayhas, UIPs and P3BS	Prior to the first disbursement and 2016 onwards	PLN HQ (as required)
Environment				
(ii) PLN UIPs equip transformers with oil retention facilities at substations extended by the program. The provision of the facilities will be integrated into the design of transformer and/or UKL/UPL of the substations.	Oil retention facilities equipped for all the transformers installed by the program	PLN UIPs	2016 onwards	PLN UIPs
(iii) PLN Wilayhas improve the management of industrial waste including old transformers and hazardous waste. The improvement includes provision of appropriate oil containment/protection measures to avoid oil spillage. Management of hazardous waste needs to fully comply with Government Regulation No. 101/2014.	Waste management fully complies with GOI requirement	PLN Wilayhas	Within a year of program commencement	PLN Wilayhas
Involuntary resettlement				
(iv) PLN Wilayhas and P3BS monitor the resettlement ^e outcomes and their impacts on the living standards of displaced persons through reviewing	The monitoring result reported to	PLN HQ (DIVSIS, DIVTRSJBS,	2016 onwards	PLN Wilayhas

Proposed Action	Indicator/Target	Responsible Agencies^a	Timeframe	Budget Resource
complaints received and conducting consultations with community, and take necessary actions if the impacts are found to affect the income and livelihood status of the APs. The implementation of this program action will be reported to PLN headquarters semi-annually.	PLN HQ semi-annually	DIVDISSUM), Wilayahs and P3BS		and UIPs
Capacity building to handle safeguards				
(v) PLN headquarters, Wilayahs, UIPs and P3BS appoint focal persons for implementing environmental and social safeguards activities of the program across the stages of selection/screening, planning, preparation and implementation. At Wilayahs, UIPs, and P3BS, different focal person will be assigned respectively for environment and social safeguards.	Safeguards focal persons are appointed	PLN HQ (DIVSIS, DIV DISSUM, DIVTRSJBS), Wilayahs, UIPs and P3BS	4th quarter 2015	PLN HQ, Wilayahs, UIPs, and P3BS
(vi) PLN build capacities of relevant field personnel at PLN headquarters, Wilayah, UIPs, P3BS, and contractors, on environmental and social safeguards focusing on the safeguards program actions.	Refresher trainings held annually	PLN HQ (DIVSIS, DIVDISSUM, DIVTRSJBS), Wilayahs, UIPs and P3BS	Every 4th quarter starting from 2015 onwards	PLN HQ
Monitoring				
(vii) The focal persons at Wilayahs and UIPs monitor and ensure the implementation of the program actions; (ii) and (iii), and report the results to PLN headquarters quarterly through the Environmental Performance Report.	The monitoring result reported to PLN HQ quarterly	PLN HQ (DIVSIS), Wilayahs, UIPs	2016 onwards	PLN HQ (as required)

DIVKONJAR = Transmission Network Construction Division, DIVDISSUM = Sumatra Distribution Division, DIVSIS = System Planning Division, DIVTRSJBS = Java, Bali, and Sumatra Transmission Division, GOI = Government of Indonesia, HQ = headquarters, PLN = *Perusahaan Listrik Negara* (State Electricity Corporation), P3BS = *Pusat Penyalur dan Pengatur Beban Sumatera* (load dispatch center of Sumatra), UIP = *Unit Induk Pembangunan* (development unit), UKL/UPL = *Upaya Pengelolaan Lingkungan Hidup / Upaya Pemantauan Lingkungan Hidup* (environmental management efforts and environment monitoring efforts)

^a In view of the announced restructuring plan of PLN on 7 August 2015, the agencies listed herein as responsible for delivering on the PAP actions may need to be revised/updated when the new organizational structure comes into effect.

^b See footnote 3 of Program Safeguard Systems Assessment. A map of the protected areas and KBAs in Sumatra is shown in Figure: Map of Protected Areas and Key Biodiversity Areas (KBAs) in Sumatra. The GIS data of the KBAs has been provided by ADB with PLN.

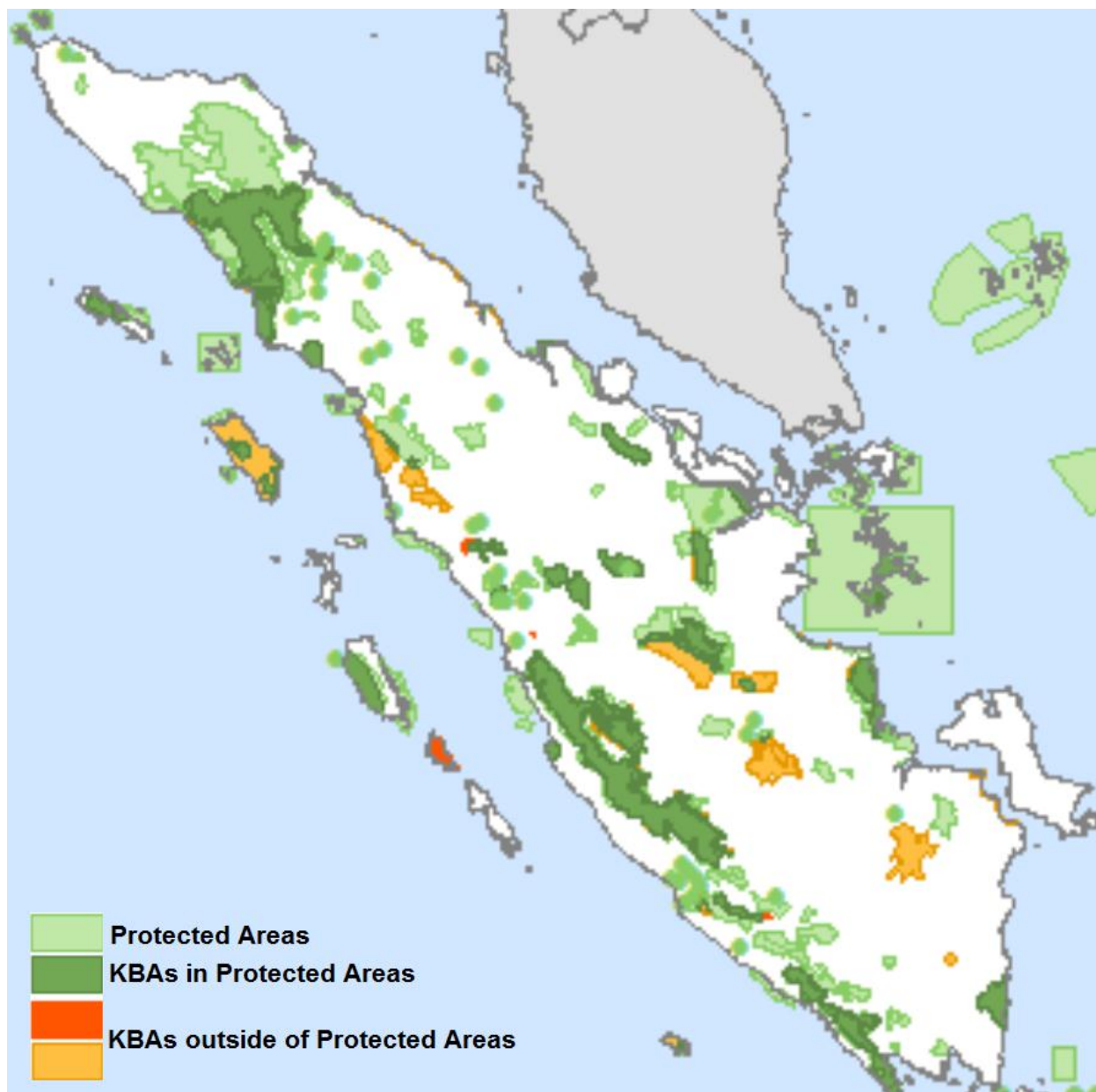
^c See para. 5 of Program Safeguard Systems Assessment.

^d Data of Remote Customary Communities (2009)³ published by the Ministry of Social, Directorate General of Social Empowerment, Directorate Empowerment of Remote Customary Communities identifies remote customary communities living in all provinces in Sumatra such as ethnics of Kubu, Mentawai, Nias, Anak Dalam, Mandailing, Mentawai, Laut, Bugis, Sakai, Bone, and Batak.

^e Resettlement means removal/damage of non-land assets and use of private land for installation of concrete poles.

Source: Asian Development Bank.

Figure: Map of Protected Areas and Key Biodiversity Areas (KBAs) in Sumatra



Source: Integrated Biodiversity Assessment Tool (IBAT). BirdLife International and Conservation International, 2015. Key Biodiversity Areas: December 2014 version. Maintained by BirdLife International on behalf of BirdLife International and Conservation International.