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INTEGRATION OF INTERNATIONAL AND INDONESIAN STANDARDS FOR ENVIRONMENTAL AND SOCIAL PROJECT DEVELOPMENT

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ABSTRACT

The common conundrum facing geothermal projects in Indonesia is the combination of environmental and social compliance with the Laws of Indonesia, and with International Guidelines, either from corporate standards or those dictated by project financing bodies, commonly International Finance Corporation (IFC) guidelines to Equator Principles. The two safeguard standards are not incompatible, and smart project planning can deliver both outcomes seamlessly from one effort.

An IFC compliant Environmental and Social Impact Assessment (ESIA) document needs to analyze potential project impacts and performance against eight performance standards for environmental and social safeguards. Many of the social standards, particularly those referring to compensation for displacement, either physical or economic and the loss of social amenity are more closely dealt with in the land acquisition process for the project than the AMDAL *per se*.

Recent changes in Indonesian legislation have clarified and streamlined the AMDAL process and have provided guidelines for the land acquisition. Albeit these guidelines are for government projects, they set a standard that moves toward IFC guidelines.

It is now easier to nest the interests of International standards and Indonesian legislation in an integrated approach that both serves the project and achieves the objectives of both frameworks.

INTRODUCTION

The common conundrum facing geothermal projects in Indonesia is the combination of environmental and social compliance with the Laws of Indonesia, and with International Guidelines, either from corporate standards or those dictated by project financing bodies, commonly International Finance Corporation (IFC) guidelines to Equator Principles. The two safeguard standards are not incompatible, and smart project planning can deliver both outcomes seamlessly from one effort.

The IFC interpretation of Equator Principles is not the only international standard that is applied to projects; in fact, many projects require the application of other frameworks. However, such is the state of the art for environmental and social assessment, most of the international standards are consistent in their approach, even though they may vary in the way they articulate their requirements or lay out their documentation for their respective audiences. IFC guidelines are used here, since by far a majority of projects request their use, especially if future financing is not secured – IFC guidelines are used as a fall-back position as they would also satisfy the standards of most financing bodies.

The Indonesian AMDAL process is a statutory process required under ministerial decree (currently Government Regulation No 27/2012). It requires a number of stages as accurately captured in the scope of work provided by a geothermal exploitation project. Key elements of an AMDAL are the Environment Impact Assessment (ANDAL) listing the project description and a statement of potential impacts and mitigations, and its Environmental Management Plan (RKL) and environmental monitoring plan (RPL). It is preceded in the process by the setting of the terms of reference (KA-ANDAL) in conjunction with an appointed AMDAL review committee. The legislation also clarifies the use of a UKL/UPL, literally “environmental monitoring effort/environmental management effort”, a mini EIA with a more streamlined approval process for smaller projects, or the early exploration or prospecting phases of resource extraction projects.

Geothermal projects require a UKL/UPL for exploration phase and an AMDAL for exploitation.

The layout and format of both a UKL/UPL and an AMDAL are fixed in the legislation. They tend to be

technical documents, targeted at the technical review committees that approve them via a "letter of environmental feasibility". The letter of environmental feasibility is then processed by the head of the jurisdiction in the issuance of an environmental permit for the project, which indicates that the RKL/RPL or UKL/UPL will be followed and used as a method of evaluation for the project's compliance. The jurisdiction under which an AMDAL or UKL/UPL is processed is currently linked to the Indonesian regional autonomy initiatives and regulations. As the statutory processing of the AMDAL is not the subject of this analysis, the reader is referred to the legislation to better understand the definitions. Suffice to say the pathways and process is the same at all levels of processing.

As per Head of BAPEDAL (Environmental Impact Management Agency) Decree No. 299 of 1996, an AMDAL requires a social impact assessment to determine the scale and significance of the social issues raised by the Project. The scope of social impact assessment will include the aspect of demography, economy and cultural aspects.

As per Health Ministry Decree No. 876 of 2001 regarding Guidelines for Public Health Impact Assessment (ANDAL Kesehatan Lingkungan), the scope of public health assessment will include:

- Environmental parameters that will be potentially affected by the Project and its influence on public health;
- Process and potency for public health impact exposure;
- Public health risk and potential (number of patients and mortality rate);
- Characteristics of the community who have health risks; and
- Health resources.

The IFC Environmental and Social Impact Assessment (ESIA) process is driven by its policy on environmental and social management of projects as published in January 2012. The policy is articulated through the definition of a series of eight performance standards, covering various aspects of project development. Those standards are:

- Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
- Performance Standard 2: Labor and Working Conditions
- Performance Standard 3: Resource Efficiency and Pollution Prevention
- Performance Standard 4: Community Health, Safety, and Security
- Performance Standard 5: Land Acquisition and Involuntary Resettlement
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- Performance Standard 7: Indigenous Peoples
- Performance Standard 8: Cultural Heritage

It also defines a series of scales or categories under which the performance standards will need to be interpreted; essentially different levels of project will trigger a different response and level of analysis and reporting. The categories are:

- **Category A:** Business activities with potential significant adverse environmental or social risks and/or impacts that are diverse, irreversible, or unprecedented.
- **Category B:** Business activities with potential limited adverse environmental or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures.
- **Category C:** Business activities with minimal or no adverse environmental or social risks and/or impacts.

Geothermal projects are, in general, Category A projects, since they have the **potential** to generate impacts which are significant and irreversible, albeit that modern mitigation strategies and methods reduce the risk of those impacts. This means that they are generally required to provide a full ESIA with substantial rigor behind their analysis of baselines, potential impacts and mitigated outcomes, and a comprehensive Environmental and Social Action Plan to indicate how the outcomes will be managed, monitored and if necessary corrected.

Given the nature of geothermal projects it is impossible to define a project description prior to the exploration phase of a project, since the nature of the operational phase cannot be defined until the resource can be proven and characterized. IFC compliant projects however should have environmental and social action plans in place for exploration because there are still significant environmental risks associated with drilling and the civil infrastructure required. Also, the exploration phase requires land access (and often land acquisition), and so the social impacts of the project commence as well. It is therefore necessary to have a two stage ESIA process – one for exploration phase and one for operation/exploitation, which mirrors the Indonesian

approach of a UKL/UPL at exploration and AMDAL for exploitation.

COMPARISON OF THE TWO PROCESSES

The processing of an AMDAL in Indonesia follows a defined pathway, both in terms of interaction with the AMDAL committee and the community. The AMDAL Process is shown in Figure 1.

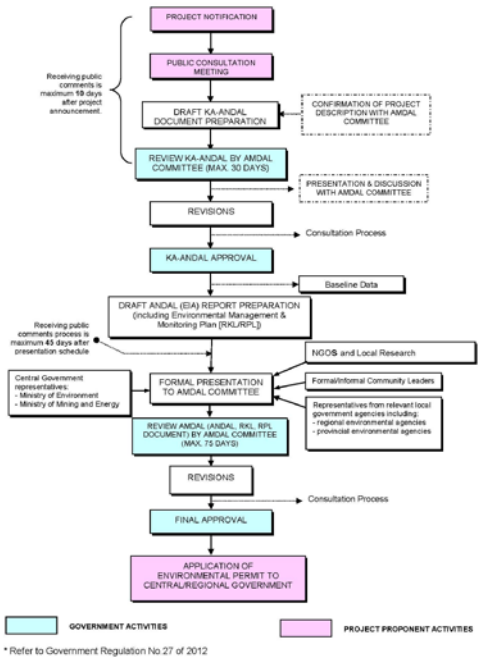

Figure 1 : The AMDAL Process

The IFC guidelines are less fixed with respect to the process and format of an ESIA Study and its development as shown in Figure 2. The actual process that is required is going to be dependent on the lenders for the project and their requirements for review, as well as the project's characteristics, footprint, land demand, need for resettlement, adjunct facilities, etc. The structure of the ESIA may also differ, for instance there may be benefit for a geothermal project to prepare separate assessments for the power plant and transmission infrastructure, although by and large it is more efficient to prepare one "whole of Project" ESIA. The split, if any should reflect the approach taken for the AMDAL, to keep the two processes as parallel as possible.

The land acquisition or leasing process of the project is often undertaken by a separate group within the project. Project-related land acquisition and resettlement in Indonesia at minimum must comply with Indonesian Government regulations, laws and Presidential Decrees for the purchase of land. As a requirement for Project IFC compliance, and as required by the Performance Standards for the purposes of the ESIA, a project should additionally comply with IFC's land acquisition requirements.

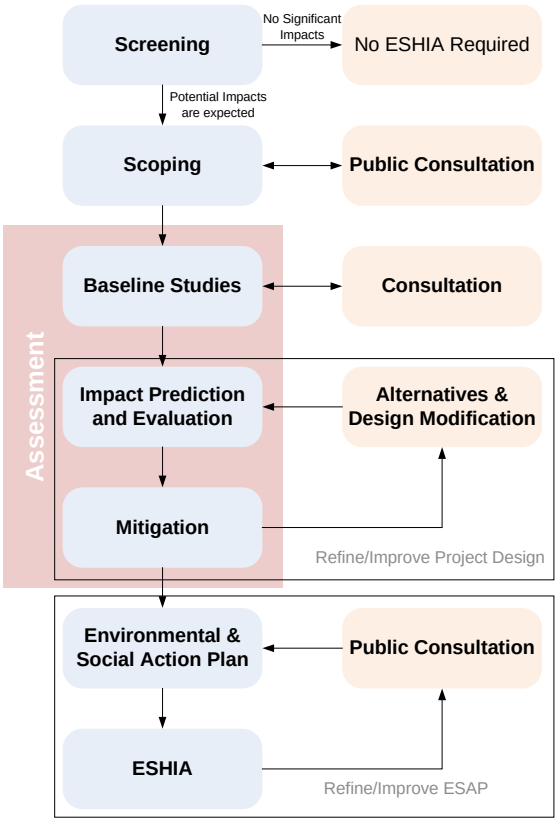

Figure 2 : IFC ESIA Process (www.ifc.org/BiodiversityGuide)

Based on the requirements of an IFC-compliant land acquisition, a Land Acquisition and Resettlement Action Plan (LARAP) is required. This should be prepared by the project Land Acquisition Team in collaboration with the ESIA team. Attention should be paid to the development of an entitlements matrix within the LARAP, which satisfies the needs of both local legislation and the International Guidelines.

Compliance with IFC standards requires a transparent process guided by three key concepts in land acquisition:

1) free prior and informed consent;
2) willing buyer – willing seller; and
3) fair and reasonable compensation for loss.

Free prior and informed consent implies the following: Free – free from corruption, interference, and external pressure; Prior – advanced notice of an activity where consent will be sought; Informed – provide project and process information prior to gaining consent; and Consent – voluntary consent to the process (in this case land acquisition). Consent is

equivalent to consenting to participation in the process and does not imply that the land owner is obliged to sell their land.

The LARAP would confirm and document that these three key concepts have been implemented for the project. The LARAP should consider both economic and physical displacement, and special consideration such as project impacts on especially vulnerable groups. It is for this reason that a project will usually compile a land census report, outlining the socioeconomic circumstances of affected parties (and families).

The two processes have similarity in their profiles and stages of the development of the study with respect to their interaction with the community and public consultation. It is for this reason that it is essential for the ESIA team to interact with the project's community engagement or land acquisition team as soon as possible in the process, and to adhere to the community consultation and public disclosure plan. Given the stage of planning of the project and the sensitivity of regional communities in Indonesia, these are often sensitive issues, but they must be grasped early in the process. The stakeholder groups that might be involved for IFC compliance are different from those involved in AMDAL public consultation and if the opportunity is missed to broaden the focus of public disclosure to satisfy both ends, it could lead to the need to repeat work, or worse still community fatigue with the socialization process.

Even if there are different groups developing the AMDAL and the ESIA, it is important they are closely coordinated on the public disclosure steps. It is also desirable that the environmental effort is coordinated with the disclosure process of the Land Acquisition in seeking claims by potentially affected parties (PAPs).

The disclosure requirements of a UKL/UPL process are quite different but can still be integrated with the requirements and expectations of an ESIA.

ENVIRONMENTAL REQUIREMENTS

There is a general alignment between the assessment of environmental parameters between the two systems of EIA. The standards that apply to the IFC ESIA process are defined in the Environment Health and Safety (EHS) Guidelines. There are two guidelines in particular reference to the Geothermal Industry: The General EHS guidelines; and the Geothermal Industry Specific guidelines. The guidelines are just that – guidelines – they set the expected standards for the ESIA of various parameters, and give examples of systems and parameters, but they allow for equivalent standards to be applied if they are more suited to the particular project or the situation. The key issue is that the sampling methods, analytical methods will stand up to scrutiny by international referees. In many cases issues such as access for sampling or distance from laboratory facilities may require a modification of approach.

The AMDAL standards tend to be more fixed and are based on legislated methods and levels as shown in Table 1.

Table 1 - AMDAL Standard Requirements

Environmental Component	Reference Standard	Concerning
Surface Water Quality	Government Regulation No.82/2001	Water Quality Management and Water Pollution Control
Air Quality	Government Regulation No.82/2001	Air Pollution Control
Noise Level	Minister of Environment Decree 48/ 1996	Noise level threshold
Vibration	Minister of Environment Decree No.49/ 1996	Vibration level threshold
Odour	Minister of Environment Decree No.50/1996	Odour level threshold
Groundwater Quality	Minister of Health Regulation No.416/1990	Water Quality Requirements and Control

There is also a specific standard for Wastewater Quality Standard for O&G and Geothermal Drilling activity, from Minister of Environment Regulation No.19/2010. This requires that drilling waste be treated as B3 hazardous waste, which is rarely the case with drilling fluids from the geothermal industry.

During the exploration phase of the project, it is common that permanent sampling facilities and facilities such as weather stations and monitoring wells have not been installed. The needs of baseline

determinations are usually met by targeted trips to site to collect baseline data for environmental parameters such as water, ecology and biodiversity services, groundwater, surface hydrology, air, noise, traffic and transport, land use and planning, and cultural heritage. The studies and sampling programs for these field campaigns can be tailored to ensure that the results will inform both EIA assessments. In most cases the needs of both local and international studies can be met by choosing the more stringent of the two or the program with the more extensive sampling requirements. On rare occasions it will be necessary to collect separate samples to satisfy each of the requirements, but careful planning of the studies program will minimize that duplication.

For geology and soils, it is common to interact with the needs of the geotechnical evaluations required for civil works, but it may be necessary to undertake separate studies to determine soil types and slope stabilities outside the specific project footprint. The Directorate General for Renewable energy in Indonesia (EBTKE) also has requirements for setting up monitoring of slope stability.

For the impacts analysis there is a greater requirement in the international standards to predict and quantify potential impacts and impact outcomes in a risk based approach. The AMDAL document still has the same requirement to identify potential sensitive receptors and indicate their potential exposure, but with less emphasis on precision prediction and more on setting up monitoring mechanisms in the RKL/RPL. This means that often International ESIA will require more sophisticated modeling scenarios to be established for the ESIA. For example a three dimensional groundwater model is the international standard for the exploitation phase (at least), whereas the AMDAL requirements are met by predictive work on flow gradients and the locations of community wells.

There are some environmental elements that are standard in an international ESIA that are not yet common in AMDAL documentation, although they may be required in some instances by some AMDAL committees depending on the nature and location of the project. These include visual impact assessment, cumulative impacts and dedicated environmental risk analysis, which modern best practice would demand in an ESIA, but have not yet become commonplace in AMDAL.

The faster track UKL/UPL process that is applied in Indonesia for exploration phase EIA often does not demand the same extent of primary data development and uses secondary data extensively. The response to this situation for the international ESIA depends upon the underlying reason for preparation of the document, but generally the full ESIA standards are required to develop meaningful environmental management plans for the exploration phase, when a number of the potential impacts of the project are manifested.

COMMUNITY AND SOCIAL REQUIREMENTS

The IFC approach to dealing with community issues goes beyond the normal limits of social impact assessment into their stated policy of interactive community participation (ICP) in an activity. To this end the stakeholder groups that are engaged in both socializing the project are more extensive than those required by the AMDAL process. Far greater emphasis is placed on interaction with the community as outlined in the IFC Stakeholder Engagement Handbook and represented in Figure 3.

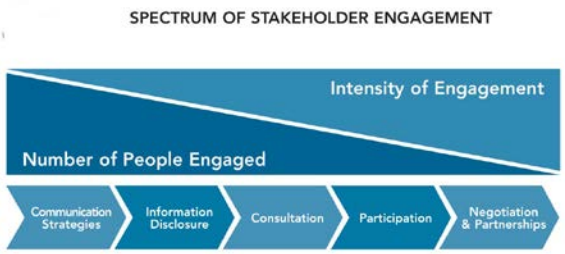

Figure 3 IFC Perspective of Community Engagement

There is an emphasis, particularly in emerging countries on a project entering a partnership with local communities. In Indonesia this is particularly true of project development in remote areas and a lesson learned time and again by many types of project proponents in all sectors, not just geothermal.

The AMDAL approach is more technical in terms of socio-economic, cultural and social amenity and public health analysis. If recent census data is available for the location of the project, the AMDAL process is comfortable with using that data, supplemented by some community survey information, particularly to gauge public perceptions.

It is wrong in both cases to overly link the public consultation stages of their process to the social analysis, but obviously there is some association.

Public health assessments tend to be more extensive for the international ESIA. In some cases, for projects that may risk systemic exposure to toxicants, the public health analysis extends to the pathological analysis of human tissue (blood or hair) to determine background levels. In the case of geothermal projects, that is unlikely to be necessary unless

testing of samples such as well water or water for domestic use already indicated concentrations of toxicants (heavy metals) that exceed the project accepted guidelines.

The socio-economic impact mitigations required by the two systems are similar to a point, but the IFC requirements through its social safeguards tend to become more extensive. In general, with the exception of the well testing period, community proximity to geothermal operations is not necessarily a major concern. Modern drilling techniques mean that access to the geothermal resource can be made from locations that do not vertically overlay the resource take-off or reinjection locations. This gives project designers the opportunity to reduce and often eliminate the need for acquisition of residential properties in the layout of the project footprint. Projects may make "No Resettlement" a key part of their project planning. This minimizes or eliminates the need for the project to deal with physical displacement.

The Indonesian conventions for acquisition of land guided by Law Number 2/2012 and interpretive regulation Number 71/2012. These regulations have moved a lot closer to the requirements of international standards, but understandably are based on the legal definition of loss. IFC standards extend to the identification of losses and inconveniences, whether or not a legal entitlement can be established. This often presents a challenge to projects where there are individuals who will inevitably take advantage of their good intentions – management of any asset recognition or claims process needs to be carefully planned prior to the public disclosures that lead to acquisition.

The document that defines the project's policy to dealing with parties affected by the project is the Land Acquisition and Resettlement Plan - LARAP (so called regardless of whether or not resettlement of people is required). At its heart is the entitlements matrix which defines the PAPs who may be entitled to some form of compensation and what forms of compensation will be planned. It must be stressed that compensation does not always need or have to be in the form of money, in fact depending on the location and resources available to the project, other forms of compensation may be more appropriate and can include:

- Like for like;
- Income restoration through retraining;
- Employment in the project;
- Job creation;
- Stipends or scholarships;
- Restoration of amenity;
- Alternative amenity creation;
- Community development; or
- Any form of compensation that may be afforded in the location and community and agreed with the stakeholders.

The list of potentially affected parties and the nature of the loss may vary from project to project; an example of the list of forms of loss and eligibility for compensation for an IFC-compliant project is given in Table 2. In the interests of transparency a project will usually engage an independent valuator to assess the magnitude of the loss by PAPs. Indonesian legislation requires independent valuations and certified valuators for this task.

Table 2 Example List of Potentially Affected Parties

Type of Loss	**Eligibility Criteria**
1. Land Loss	
Land in any category (permanent)	1A.Holder of land title; Holder of right to manage; Guardian *(nadzir) for waqf* land; Owner of formerly traditionally owned land (*adat* land); Customary law community; Party who possesses the land in good faith; Holder of evidence; Owner of structures, plants, and other objects related to land
	1B.Government Agency
	1C.Illegal settlement (Squatters); informal user
Where the remaining portion of land is not viable (permanent)	1D.PAPs whose remaining land is no longer viable, i.e. no economic value. PAPs with tenure as recognized by 1A to 1C above.
Temporary loss of land access or function (for instance during project construction)	1E.Holder of land title; Holder of right to manage; Guardian *(nadzir) for waqf* land; Owner of formerly traditionally owned land (*adat* land); Customary law community; Party who possesses the land in good faith; Holder of evidence; Owner of structures, plants, and other objects related to land
	1F.Tenant/informal user (Squatters)
Any land whose use is restricted by the project	1G.Holder of land title; Holder of right to manage; Guardian *(nadzir) for waqf* land; Owner of formerly traditionally owned land (*adat* land); Customary law community; Party who possesses the land in good faith; Holder of evidence; Owner of structures, plants, and other objects related to land;
	1H.Informal users (Squatters)

Type of Loss	Eligibility Criteria
Forestry	1I.Government (Ministry of Forestry);
	1I.Customary (Adat) / traditionally assigned land ownerships (in forestry areas)
2.Structural	
Residential, total loss	2A.The owner of the building can be: a individual, a legal entity, social agencies, religious agencies, or government agencies that have evidence of possession of the building. (permits: letter building construction (IMB); physical control statements and telephone bills, electricity bills, water bills)
	2B.Illegal settlement (Squatters); informal user
Residential partial loss	2C.The owner of the buildings can be: individual, legal entity, social agencies, religious agencies, or government agencies that have evidence of possession of the building. (permits: letter building construction (IMB); physical control statements and telephone bills, electricity bills, water bills)
Residence rendered non-viable by the project	2D.Owner or joint owners, titled, or with legal registration (permits: letter of building construction (IMB); physical control statements and telephone bills, electricity bills, water bills)
	2E.Informal users (Squatters) with recognition as PAPs
Commercial/ industrial building and assets (e.g. shop, workshop, shed, factory)	2F.Owner or joint owners, titled, or with legal registration (permits: letter building construction (IMB); physical control statements and telephone bills, electricity bills, water bills)
3. Trees and Crops	Farmers, croppers and/or harvesters who derive incomes or livelihoods from the affected crops; owners of land with crop losses
4. Income Losses	Losers of business or employment income
5. Public facilities	The affected government or other recognised agency, via the leadership of the relevant-level authority
6. Allowances for project impacts	All severely affected peoples including informal settlers and relocated tenants
7. Relocation allowance (if the project involves relocation or resettlement)	All affected peoples who have to relocate, including renters.
8. Services and utilities	Owners or users of land or structures to which services/access to utilities have been disrupted or lost
9. Taxes and administrative costs	All categories of PAPs
10. Cost of preparing or updating title/ownership documents for the residual area of the PAP's land	All PAP owners suffering whole or partial loss of land or structures
11. Vulnerability allowance	"Especially vulnerable" including but not limited to: households headed by single parent, woman or widow; pregnant women or women with a newly born child; those with more than six dependent children; those who have a family member who has a disability or long term illness (including mental illness) and who has mobility challenges; or extreme poverty.
12. Contingencies	Any PAP identified in the course of the project, and/or accepted as eligible by the Project

CONCULSIONS

The key message is that international compliance and the local level approvals process through AMDAL legislation are not incompatible, or mutually exclusive. There are many instances of commonality of content, purpose and process that make it possible in the environmental and social assessment process for a project to satisfy both objectives, but this requires:

- Careful planning at the outset;
- Alignment of the AMDAL and ESIA teams;
- Considered design of underlying field studies;
- Close communication with all elements of the project development including, community engagement, land acquisition, engineering design, drilling planning and management, and project management.

It is a distinct advantage if the project financiers can be consulted at the outset to make sure that the expectations of all parties can be addressed in a cohesive and coordinated approach.

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