

Annex 3

MINISTRY OF ENVIRONMENT DECREE NO. 308 YEAR 2005

regarding

Implementation of EIA, environment management effort and environment monitoring effort for rehabilitation and reconstruction activities in NAD province and island of NIAS, North Sumatra Province.

Consideration

1. That Earthquake and tsunami in Aceh (NAD) and NIAS has destroyed the infrastructure and rendered hundreds of thousands of victims.
2. The region devastated by tsunami should be rehabilitated and reconstructed as soon as possible, to remediate the psychological and emotionally struck people and the socio economic life of community.
3. To implement the rehabilitation and reconstruction in Aceh and NIAS, the conventional AMDAL regulation cannot be utilized as is.
4. Given the above points 1, 2 and 3, it is necessary to issue the ministerial decree regarding the implementation of the rehabilitation and reconstruction in Aceh and NIAS, a special AMDAL regulation, called Ministry Decree No. 308, 2005.

Chapter I General

Article 1 : Description and Definition

- The Technical Institution is the institution which will undertake activities in rehabilitation and reconstruction in Aceh and NIAS (i.e. Agriculture, Health, Fisheries etc).
- Institution which manages and controls the EIA is the Institution, which is responsible for EIA in the field in NAD Province Sumatra Province.
- The Commission of EIA is the Commission which has the task to evaluate EIA documents in NAD and North Sumatra Province.
- Ministry is the Ministry which has responsibility to manage environment.
- Governor is Governor of NAD province and North Sumatra province.

Article 2 : Type of activities undertaken for rehabilitation and reconstruction post-Tsunami in NAD and NIAS must be equipped with EIA, the activities that have been listed in Annex I. Annex II contains the activities which must be equipped with UKL and UPL document.

Article 3 : Governor can propose a change to the list mentioned in Article 2 to the Ministry.

Chapter II The Commission of Evaluator EIA (The Commission)

- Article 4 : 1. The Commission is instituted in NAD and North Sumatra by the Governor.
2. The Commission discussed the TOR and EIA document (ANDAL, RKL, and RPL).
 3. The Commission is supported by a technical team (TT) and the secretariat of EIA.

Article 5 : The Commission consists Bappeda, Bapedalda agriculture department, police, health, representatives from the institution which are concerned with the project activities, Bapedalda district offices, NGO, and representative from the community who were infected by the impact of the activities.

- Article 6 : The Head of Commission has the task to:
- Coordinate the evaluation process of TOR, and EIA document (ANDAL, RKL and RPL).
 - Report the result of the evaluation to the Governor for a decision on acceptance of the TOR and the impacts on environment.

Article 7 : Technical Team

Technical team consists of experts from the technical institution which is undertaking the project activities, Bapedalda province staff, experts from Ministry of Environment and other experts who have expertise in the activities.

Article 8 : Technical Team has the task to:

- Coordinate with the proponent during the scooping process.
- Determine (prepare) the TOR and report to the commission.
- Give technical guidelines to the proponent for preparation of EIA document.
- Undertake technical evaluation of the EIA document.
- Report to the Commission the result of the evaluation of EIA document and give recommendations to Commission about EIA studies.
- Help the Commission in formulating recommendations of EIA studies to the Governor.

Chapter III Environment Impact Analysis Procedure

Section One: announcement

Article 9:

1. The proponent in undertaking the EIA is obliged to:
 - a. Inform the work program to the responsible institution.
 - b. Announce the work program and/or the activity to the public in accordance with the announcement or press release or electronic media.
2. Announcement as mentioned in (1) consist of :
 - a. Name and address of proponent.
 - b. Location/Scale/Area and Work Program.
 - c. Type of Activities Planned

- d. Type of Product/Project
- e. Possible environmental impacts that may occur.
- f. Date of announcement and time limits for suggestions and any complaints from the surrounding community.
- g. Name and address of the responsible institution to receive suggestion and complaints from the community.

Article 10:

Everybody has the right to suggest, inform, respond, etc in a letter to every planned activity within a period of maximum 10 (ten) days from the day of the announcement.

Article 11 :

Commission of EIA obligated to consider any suggestions, complaints from the community about the feasibility of environmental effect pertaining to planned activities.

Section Two : Scoping

Article 12 :

1. In the scoping activity, Proponent should give information and data in writing to the EIA Commission.
2. Data and information as mentioned in verse (1) consist of :
 - a. Activities planed and/or some alternative activities which will be evaluated in the EIA.
 - b. The component of planned activity and/or alternatives which will potentially cause environmental impacts.
 - c. The environmental issues which are potentially impacted by the planned project activity(s).
 - d. Areas influenced or impacted as related to ecological and social aspects.
 - e. Community which is potentially affected by the project activity.
 - f. Government institution or other institutions which are potentially concerned with the project activity.
 - g. Other relevant information.

Article 13:

1. In the scoping process, the Technical Team can ask additional information from the proponent and others and also carry out surveys to project area.
2. Technical Team responsible to report additional information according to (1) above to the EIA Commission comprises:
 - a. Activities planned and/or alternative activities evaluated in the EIA and also factors considered for the choice of alternatives.
 - b. Units of community which are consulted as part of the EIA process.
 - c. Governor or other institutions involved in the EIA process.
 - d. Hypothesis of impacts assessment presented in the EIA.

Article 14:

1. Technical Team proposes term of reference (TOR) to the EIA commission.

2. Term of reference of EIA consists of :
 - a. Project alternatives to be assessed in the EIA study.
 - b. Scope of study for the EIA.
 - c. Existing environmental data needed for EIA study.
 - d. The impact assessment hypothesis as proposed in the EIA.
 - e. The study details for AMDAL.
 - f. The experts to undertake the EIA study.

Section Three: Terms of Reference of EIA

Article 15:

1. The EIA Commission, Technical Team, and the proponent together evaluating TOR of EIA to get an agreement concerning the cope of EIA study.
2. The EIA Commission based on evaluation refers in (1) decides to approve the TOR of the EIA.

Section Four: EIA arrangement and environment management effort and environmental monitoring effort.

Article 16:

1. Based on the agreed TOR of the EIA as mentioned in article 15 verse 2. The proponent must consult the affected community, institution in the provinces and districts concerned with the project activity and other associated stakeholders.
2. The proponent must document the results of the consultation as mentioned in the verse (1) and make recommendations to be sent to EIA Commission.
3. The Technical Team can assist the proponent to make changes per recommendations mentioned in the verse (1).

Article 17:

Proponent must arrange the EIA environmental management effort and environmental monitoring effort based on the TOR which is agreed by the EIA Commission and results of consultation as referred to in article 15 and article 16.

Article 18:

1. The proponent must consult the Technical Team to arrange EIA environmental management effort and environmental monitoring effort.
2. Consultation as mentioned in verse (1) is needed to ensure that the application of the EIA environmental management effort and environmental monitoring effort is adequate in accordance with the TOR of the EIA.
3. If EIA environment management effort and environment monitoring effort is not adequate or compliant with the TOR as agreed and if there are changes to planned activities, the Commission of EIA takes a decision on the inadequacy and/or changes to TOR or takes advice from Technical Team.

4. The EIA Commission must inform the result of the decision as mentioned in the verse of (3) to the Governor.

Article 19:

1. The EIA document consists of :
 - a. The objective of the planned activities.
 - b. The description of activities planned and details on compliance with government policy and regulation.
 - c. The description of the activities planned to ensure that objectives of the project as mentioned in the study and proposal can be met.
 - d. Environmental condition of the study area.
 - e. Environmental impacts due to the planned activities or other activity.
 - f. The scope of environmental management and environmental monitoring program.
2. The document of the environmental management effort, consists of :
 - a. Components or parameters of environment which are predicted to be impacted as per the analysis in the EIA.
 - b. Source of impacts.
 - c. Environmental parameter which are assessed.
 - d. The objective of environmental monitoring effort and standards used to monitor the environment.
 - e. Efforts to manage the environment.
 - f. The location of environmental management effort.
 - g. The responsible institution to manage the environment management tasks.
3. The document of environment monitoring plan comprise of :
 - a. Components or parameters of environment to be monitored.
 - b. Source of impact.
 - c. The environmental parameters which are monitored.
 - d. The objective of environmental monitoring.
 - e. The environmental monitoring methods.
 - f. The schedule and frequency of monitoring.
 - g. The location of environmental monitoring.
 - h. The responsible institution to carry out environmental monitoring tasks.

Section Five: Evaluation of the EIA's Environmental Management Plan & Environmental Monitoring Plan.

Article 20:

1. Proponent sends the results of the EIA study's environmental management plan and environmental monitoring plan to the EIA Commission
2. The EIA Commission as mentioned in verse (1) must give formal receipt of the data received concerning the EIA and environmental management and monitoring plan as in verse (1).

Article 21:

1. The EIA Commission is obligated to the Technical Team to evaluate the result of the EIA environmental monitoring plan and environmental management plan.
2. Technical evaluation as mentioned in the verse (1) comprises of :
 - a. The adequacy of contents of EIA, environmental management and environmental monitoring plans.
 - b. The compliance between the regulation and the EIA.
 - c. The accuracy of test methods or analysis methods employed.
 - d. Data validation.
 - e. Feasibility of project design technology or production employed.
3. To evaluate the EIA, the technical team should consult with environment experts and experts related to the project or activities.
4. Technical Team reports the evaluation results to the EIA Commission.

Article 22:

1. The EIA Commission evaluates the EIA environmental management and environmental monitoring and the refers results to Technical Team.
2. In the evaluation as referred in verse (1)
 - a. The members from institutions in province evaluate the EIA from their own policy point of view.
 - b. The members from district evaluate the EIA from the policy aspects of the area being built or developed.
 - c. The members from NGO evaluate from the aspects of public and general environmental interests
 - d. The members from the community give comments from the point of view of community aspiration and interest.

Section Six: Decision Maker

Article 23:

1. The EIA Commission gives recommendation after evaluating the EIA program of environmental management and takes a decision.
2. If the EIA undertaken results in:
 - a. Big negative impact and if the impacts cannot be solved by appropriate technology or.
 - b. Cost to mitigate the negative impact is higher than positive impact caused by the activity; then the Governor releases a decision to not recommend because the activities planned are not favorable to the environment.
3. The government body with the responsibility for the planned activity prepares a recommendation or refusal to undertake the activity in the area if Governor gives decision as a referred to verse (2).

Article 24 :

In the EIA's ANDAL, environmental management plan and environmental monitoring plan, the recommendation for feasibility or non-feasibility of planned activities, must also be reported to the Ministry of Environment institution which is responsible to declare permission for undertaking that activity, other institutions involved, main district involved and other stakeholders.

Chapter IV Environmental Management Activity and Environmental Monitoring Activity Procedure

Section One: Arrangement

Article 25 :

1. Activities for which no EIA is required, the proponent should undertake environmental management and environmental monitoring activities before applying for the activity.
2. The arrangement of environmental management and environmental monitoring as referred to in verse (1) is done in accordance with the format as described in the Appendix II of the Ministry environment regulation.
3. The environmental management and environmental monitoring effort should assess the environmental conditions and the state of the community against the impact caused by the proposed plan.

Section Two: Proposal

Activities of environmental management and environmental monitoring effort.

Article 26 :

Proponent applies to do the environmental management activities and environment monitoring activities, to the institution that is responsible for environment management at the province level.

Article 27 :

1. Based on the form of environmental management and environmental monitoring activities as mentioned in article 25, verse (2) the institution responsible for environment impact assessment at province level should coordinate with district or city and institutions responsible to check the form within a maximum of 7 (seven) day after the form is received.
2. If any inaccuracy is found between planned activity and the site plan regulation and/or affecting the preservation area; then the institution which has duty to preserve the environmental impact at province level should give an order to the proponent to move the location of planned activity in accordance with the regulation.

3. If lack of information or clarity in the form of the environment management and/or additional data is required or; proponent must make correction according to the result of evaluation within 7 (seven) days.
4. Institution responsible for EIA at province level is obligated to present a recommendation concerning environmental management and environmental monitoring activities to the proponent within maximum 10 (ten) days after they receive the form of the environmental management and the environmental monitoring effort.

Article 28:

If the form of environment management activity and the environmental monitoring activity is perfect or complete, the institution responsible for environmental management at the province level should give recommendation within a maximum of 14 (fourteen) days after they receive the form of the environmental management activity and the environmental monitoring activity.

Article 29:

Proponent proposes a recommendation concerning environmental management activity and the environmental monitoring activity from the institution mentioned in article 27 to the responsible institution as a reference to issue to do the activity.

Article 30:

1. The Chief of the responsible institution issues an order for activities to be written as obligation with conditions and responsibilities assigned, as included in the environment management plan the environment monitoring plan correlated to that activity.
2. Permission is issued by the Chief of responsible institution as mentioned in verse (1), a copy sent to other institution responsible for environmental management and environmental monitoring or to institution responsible in the field of preservation of environmental management at province or district level depending on their responsibility as mentioned in the article 25.

Chapter V : Control

Article 31:

1. Proponent is obliged to report the implementation of environment management plan and environment monitoring plan to the institution which has right to give permission; institution which have responsibilities for activities; Ministry of Environment; Governor and Head of District.
2. Institutions which have task in the EIA in district/city have to :
 - a. Manage and evaluate the implementation of RKL and RPL.
 - b. Review the report proposed by the proponent as mentioned verse (1).

- c. Submit the monitoring report to the Ministry, Governor and Head of District/Mayor periodically, at least two times per year, and send copy to the institution which issuing the permission to undertake the project.

Chapter VI : Budget

Article 32:

The budget for the EIA Commission and technical team should be supported by central government budget and other resources

Article 33:

1. The budget for EIA, environmental management plan and environmental monitoring plan should be supported by the project proponent.
2. The budget for discussion of TOR, EIA assessment, environment management plan and environment monitoring plan should be supported by project proponent.

Article 34:

The budget for control as mentioned in article 31 verse (2) is subject to the budget of each institution and also other resources.

Chapter VII : Closing

Article 35:

EIA documents is part of contract document.

Article 36:

This Ministry Environment Decree only for the rehabilitation and reconstruction in NAD province and NIAS which impacted by Tsunami on 26 December 2004 and the earthquake on 28 mart 2005 in the NIAS island, North Sumatra.

Article 37:

This Ministry of environment Decree valid since the date of issued and will be ended on 16 April 2009.

Decided in Jakarta
On : 28 September 2005
Ministry of Environment

Rachmat Witoelar

APPENDIX 1 of Ministry Of Environment Decree No.308, 2005

Type of Activities which must be equipped with AMDAL (EIA)

- A. Agricultural
- B. Fisheries
- C. Forestry
- D. Health
- E. Transportation
- F. Industry
- G. Regional infrastructure
- H. Energy and Mineral Resources
- I. Tourism
- J. Hazardous and Poisonous Waste Management.

Type of Activities	Scale/Magnitude	Special Reason
1	2	3
<p>A. Agriculture</p> <ul style="list-style-type: none"> 1. Annual food crop and horticulture, with or without processing plant. 2. Perennial food crop and horticulture with or without processing plant. 3. Annual estate plantation, with or without processing plant : <ul style="list-style-type: none"> a. Outside the sylviculture area. b. Inside the sylviculture area 4. Perennial estate plantation with or without processing plant. <ul style="list-style-type: none"> a. Out side the sylviculture area. b. In side the sylviculture area. 	<ul style="list-style-type: none"> Area ≥ 2000 Ha Area ≥ 5000 Ha Area ≥ 3000 ha Area all scale Area ≥ 3000 Ha Area all scale 	<ul style="list-style-type: none"> Land erosion As above As above As above
<p>B. Fisheries</p> <ul style="list-style-type: none"> 1. Fish harbor <ul style="list-style-type: none"> a. Long of pier b. Or has industrial area c. Or the depth of pond of harbor. 	<ul style="list-style-type: none"> ≥ 300 m Area ≥ 10 Ha ≥ -4 m LWS 	<ul style="list-style-type: none"> 1) Destruction of mangrove forest which become spawning and nursery ground of fishes. 2) Has potential of social conflict. 3) Change of water quality 4) Impact in water estates 5) Change the current

Type of Activities	Scale/Magnitude	Special Reason
1	2	3
C. Forestry 1. Extraction of timber 2. Sylviculture	All scale Area ≥ 5000 Ha	Extraction / cutting of timber have potential to change the structure of tree composition, wild life and their habitat. Sylviculture with cutting totally, and land clearing using heavy equipment.
D. Health	-	-
E. Transportation 1. Rail road 2. Development train station 3. Dredging the channel of river navigation. 4. Development of Harbor/port with facilities, like : a) Length of pier or supervision area b) Supporting harbor infrastructure. c) Single point mooring buoy 5. Capital dredging of harbor pond. 6. Reclamation 7. Dumping of the dredging a) Over the land b) In the sea	Length ≥ 25 KM Big scale or class 1 (one) Volume ≥ 500.000 m ³ ≥ 200 m Area ≥ 6200 m ² Area ≥ 5 Ha ≥ 10.000 DWT Volume ≥ 250.000 m ³ Area ≥ 25 Ha, or Volume ≥ 5,000,000 m ³ Area ≥ 5 Ha Volume ≥ 250.000 m ³ All scale	Impacts incl.: emission, obstruction of car transportation, nuisance and social. Impact of dust, obstacle of car transportation ecology social. Potentially impacts to hydrology, ecology and disturbance in river transportation. Can receive ship : 5000 – 10.000 DWT Depth of pond 5-9 LWS impacts includes hydrology, ecosystem, coastal processes. Impacts include change of bathymetry, ecosystems, natural processes in the area & coastal area. Impacts include geohydrology, oceanography, ecology, coastal line, natural process, social. Change in stretched land, ecology, local hydrology. Impact in sea ecosystem, bathymetry, turbidity, productivity of the bed, social, current.

Type of Activities	Scale/Magnitude	Special Reason
1	2	3
<p>8. Development of new airport</p> <p>9. Development (spreading) of air port with.</p> <p>a) People relocation</p> <p>b) Land acquisition</p> <p>c) Coastal reclamation</p> <p>- Area</p> <p>- Or Volume</p> <p>d) Cutting of mountain and dumping.</p>	<p>All scale</p> <p>≥ 200 family</p> <p>Area ≥ 100 Ha</p> <p>Area ≥ 25 Ha</p> <p>≥ 100.000 m³</p> <p>Volume ≥ 500.000 m³</p>	<p>Impacts of nuisance, trembling emission, and social impacts, develop in land transportation.</p> <p>Impact in nuisance, trembling emission, and social, develop in land transportation.</p>
<p>F. Industry</p> <p>1. Cement</p> <p>2. Pulp and Paper</p> <p>3. Petrochemical Industries</p> <p>4. Iron and steel</p> <p>5. Industries which produce: Pb, Cu, Al</p> <p>6. Integrated industrial estate</p> <p>7. Docking industries</p> <p>8. Aero plane industry</p> <p>9. Weapon and ammunition and explosive materials</p>	<p>All scale</p> <p>All scale</p> <p>All scale</p> <p>All scale</p> <p>All scale</p> <p>All scale</p> <p>≥ 4000 DWT</p> <p>All scale</p> <p>All scale</p>	<p>Use lot of land (area), water, energy, people, potential to produce waste (tailing, dust) gas (CO₂, NO_x, SO_x)</p> <p>Use lot of land (area), manpower, energy.</p> <p>Use lot of land, water, manpower, energy, potential to produce wastes (liquid, gas, and hazardous)</p> <p>Use lot of land, water, manpower, energy, potential to produce wastes (liquid, gas, hazardous, and dust).</p> <p>Produce waste (hazardous gas, dust, acidic liquid). Use lot of land, water, manpower, energy, potential to produce wastes (liquid, gas, hazardous, and dust; gasses: SO_x, NO_x, CO_x; tail gas which contain: Zn, Pb, Cd, Hg; liquid waste (content: Fe, CO, Zn, Hg, Pb, Sn, As, Ni, Se, F, Cd, Cr, TDS, and TSS; solid waste).</p> <p>Use spacious land, need large energy, very much man power, very much water; produce hazardous waste – solid, liquid, gas (H₂S, NH₃, NO₂, SO₂, HF) and dust.</p> <p>Activities of grading, operational of heavy, equipment mobilization of man power (90-110 persons/ha). Need housing and social facility, need drinking water, use large energy. Produce waste (liquid, solid). Potential to produce liquid waste, gas, dust (sand blasting).</p>

<p>10. Dry cell industry</p> <p>11. Wet cell (electric accumulator)</p> <p>12. Organic and inorganic chemical industry which produce hazardous material</p> <p>13. Industrial estate, excluding number 1 until 12 above</p> <p>a. Urban</p> <ul style="list-style-type: none"> - Metropolitan - Big City - Middle City - Small City <p>b. Rural</p>	<p>All scale</p> <p>All scale</p> <p>All scale</p> <p>All scale</p> <p>≥ 5 ha</p> <p>≥ 10 ha</p> <p>≥ 15 ha</p> <p>≥ 20 ha</p> <p>≥ 30 ha</p>	<p>Use of land, produce nuisance and trembling. The raw material used can be toxic, hazardous.</p> <p>Used mercury that may be mutagenic, carcinogenic to human beings. Needs manpower and water.</p> <p>The processing production: grid casting, lead part, lead powder, pasting, formation and assembling. The impact:</p> <ul style="list-style-type: none"> - Use much water and man power - Use large energy - Produce liquid waste (low Ph, SO²₄, Pb), gas which content (Pb, CO_x, NO_x, SO₂) and solid waste. <p>Potentially produce air water and soil pollution.</p> <ul style="list-style-type: none"> - Land acquisition process - Carrying capacity of the land. - Potentially produce impact: <ul style="list-style-type: none"> • Transportation • Social conflict • Decreasing the environmental quality
<p>G. Regional Infrastructure</p> <p>1. Dam construction</p> <ul style="list-style-type: none"> - High - Area of inundation <p>2. Irrigation network</p> <p>a. New construction with area</p> <p>b. Increased capacity of irrigation network</p> <p>c. New paddy field construction</p> <p>3. Reclamation of marsh</p> <p>4. Normalization of river and construction of canal</p> <p>a. In big city/metropolitan:</p> <ul style="list-style-type: none"> - Length - Volume of dredging <p>b. Middle town:</p> <ul style="list-style-type: none"> - Length - Volume of dredging <p>c. Rural:</p> <ul style="list-style-type: none"> - Length - Volume of dredging 	<p>≥ 15 m</p> <p>≥ 200 ha</p> <p>Area ≥ 2000Ha</p> <p>Area ≥ 1000 ha</p> <p>Area ≥ 500ha</p> <p>Area ≥ 1000 ha</p> <p>≥ 5 km</p> <p>≥ 500,000 km³</p> <p>≥ 10 km</p> <p>≥ 500,000 m³</p> <p>≥15 km</p> <p>≥ 500.000 m³</p>	<p>Big dam category. Impact hydrology and local climate.</p> <ul style="list-style-type: none"> - Potentially produce impact - Social (mobilization of man power) - Land acquisition - Change in hydrology - Regional ecosystem <p>- Potentially change micro climate</p> <p>- Change hydrology</p> <ul style="list-style-type: none"> - Mobilization of heavy equipment - Dust, dumping of land over the both side of the river - Social impact <p>As above</p> <p>As above</p>

<p>5. a. Toll road construction b. Fly over and subway</p>	<p>All scale ≥ 2 km</p>	
<p>6. Road rehabilitation, etc. a. Big City : length - Area b. Middle City length - Area c. Rural : length</p>	<p>≥ 5 km ≥ 5 ha ≥ 10 Km ≥ 10 ha ≥ 15 km</p>	<p>Impact in obstruction of transportation, nuisance, trembling dust, social. Impact in nuisance, dust, trembling, visual, and social.</p> <ul style="list-style-type: none"> - Rate of land acquisition - Land carrying capacity - Capacity of water absorption - Domestic waste - Mobilization of material and people
<p>7. Sewage/domestic, etc. a. Control sanitary landfill - Area - Or total Capacity</p>	<p>≥ 10 ha ≥ 10.000 ton</p>	<p>Potential impact pollution, bad smell and health.</p>
<p>b. Dumping site in the tidal zone - Land Fill - Or total capacity</p>	<p>≥ 5 ha ≥ 5000 ton</p>	<p>As above</p>
<p>c. Development of transfers station : - Capacity</p>	<p>≥ 1000 ton/day</p>	<p>As above</p>
<p>d. Open dumping system</p>	<p>All scale</p>	<p>As above</p>
<p>8. Housing a. Metropolitan city b. Big city c. Middle an small city</p>	<p>≥ 25 ha ≥ 50 ha ≥ 100 ha</p>	<p>Impact in obstruction of transportation, nuisance, trembling dust, social. Impact in nuisance, dust, trembling, visual, and social.</p> <ul style="list-style-type: none"> - Rate of land acquisition - Land carrying capacity - Capacity of water absorption - Domestic waste - Mobilization of material and people
<p>9. a. Faecal processing b. Domestic waste processing c. Pipe network for the waste</p>	<p>≥ 2 ha ≥ 3 ha ≥ 500 ha</p>	<p>Impact of bad smell</p>
<p>10. Housing drainage a. In Metropolitan b. In middle city</p>	<p>≥ 5 km ≥ 10 km</p>	<p>As above</p>
<p>11. Piping for clean water in metropolitan. a. Area of service b. Transmission network for clean water</p>	<p>≥ 500 ha ≥ 10 km</p>	<p>Change of hydrology</p>
<p>12. Take water from lake, river, water spring, or superficial water resources. - Debit</p>	<p>≥ 250 l/s</p>	<p>Change of hydrology; shortage of water resources</p>
<p>13. Development of housing for relocation (transmigration) - Total people relocated - Or Total area</p>	<p>≥ 200 family ≥ 100 ha</p>	<p>Capacity is 200,000 people</p>
		<p>Impact of Land Acquisition; land carrying capacity to be considered</p>

H. Energy and Mineral Resources		
A. General Mining		
1. Area of permission - or open area for mining	≥ 200 ha ≥ 50 ha	Change of landscape; change of ecology and hydrology
2. Exploration Production Phase of :		
a. Coal	≥250,000 tons /year ROM	Correlated with security and defense.
b. Primary grain	≥200,000 tons /year ROM	Pb is very easy to distribute.
c. Secondary grain (Alluvial Deposit).	≥150,000 tons /year ROM	
d. Mining C type	≥ 250.000 m ³ /year	
e. Radioactive digging material	All scale	Radiation impacts
f. Digging material for Pb (includes processing and purification)	All scale	Hazardous waste
3. Mining in the sea	All scale	Change in bathymetry, ecosystem obstacle of sea transportation and natural process in the sea/ coastal regions social impact.
4. Submarine tailing disposal	All scale	Impact in change of bathymetry, ecosystem, disturb the natural process in coastal region, impact in health and social.
5. Processing of grain of metals with Cyanide use	All scale	Hazardous waste
B. Electrical Energy		
1. Development of Diesel Generator, Gas and Steam Generators	≥100 MW	Physico-chemical impacts especially air quality (emission, nuisance), water quality and ground water.
2. Electric Energy from geothermal.	≥55 MW	Physico-chemical impacts and water quality : - bad smell and nuisance. - Flora and fauna aspect. - Social and economics aspect (land acquisition)
3. Electricity from water: - height of dam - area of inundation - capacity	≥15 m ≥200 ha 50 MW.	Need quarry/burrow area, impact in hydrology, water quality, flora and fauna, socio – economics
4. Development of electricity from wind, sun or biomass and peat energy.	≥10 MW	Need large space; impact include nuisance and ecosystem of peat

C. Oil & Gas		
1. Exploitation of oil and gas (on shore)		
a. Oil field	≥5,000 BOPD	Impact from mud drilling, blow-up air and surface and ground water pollution Disturb of ecosystem Socio – economics
b. Gas field	≥30 MM SCFP	Impact from mud drilling, blow-up air and water pollution. Change environment of sea ecosystem. Economics
2. Off shore/sea	All scale	As above
3. Oil and gas transmission :		
a. on land :		
- length	≥50 km	Land acquisition (may inter districts/town) during construction cause erosion.
- Pipe diameter	≥20 inch	Potential in right of way (ROW) Pressure in the pipe is very high.
b. In the sea	All scale	Disturbance to sea transportation and fishermen activities, dangerous for anchoring of ships Pressure in the pipe is very high.
4. Building of Finery		
- LPG	≥ 50 MMSCFD	- Impact in social aspect,
- LNG	≥550 MMSCFD	- Strategic industries
		- Has potential producing derivatives waste
		- Produce gas, liquid and solid waste
		- Need large space
		- Produce H ₂ S.
5. Building Oil Refinery	≥10,000 BOPD	- Impact in social conflict
		- Strategic industries
		- Has potential producing derivatives waste
		- Produce gas, liquid and solid waste
		- Need large scale
		- Can change geo-hydrograph system
6. Development of Used Lubricant	≥10,000 tons/year	- Impact in social conflict
		- Strategic industries
		- Has potential producing derivatives waste
		- Produce gas liquid and solid waste
		- Need large space
		- Potentially change geo hydrograph

<p>D. Geology 1. Take under water ground</p>	<p>≥50 l/s (from one well or five well in the area of ≥ 10 ha)</p>	<p>May change geo hydrology or from and sea water intrusion</p>
<p>E. Tourism 1. Recreational Park 2. Tourist estate 3. Hotel • total rooms • total square 4. Golf Court (not include driving range)</p>	<p>≥ 100 ha All scale ≥ 200units ≥ 5 ha All scale</p>	<p>Potential impacts include obstruction of transportation, land acquisition and garbage - solid waste. Impacts to land, obstruction of transportation; land acquisition and solid wastes. Impact from country, need water in large volume Liquid and solid waste (domestic). Impact from pesticide/herbicide run-off, need much water.</p>
<p>J. Hazardous and Poisonous waste processing. 1. Gathering, processing or accumulation as main activities</p>	<p>All scale (Except small scale of oil used processing, slop oil and flux solder.</p>	<p>Potential impacts to human health and environment. These activities use hazardous waste as raw material.</p>

Ministry of Environment

Rachmat Witoelar

**APPENDIX II Ministry of Environment Decree No. 308/2005
Guideline for Environmental Management Plan and Environment Monitoring Plan
(UKL and UPL)**

Introduction

The UKL and UPL are developed from a simple list used for identifying and predicting the impact in EIA. One advantage of this method is that the guideline assists in identifying and analysis of important impacts which must be taken into account. Besides this method can stimulate discussion among inter-disciplinary teams in project planning. This method is suitable for projects, which are to be built in a short period of time, but without neglecting the environment and social aspects post earthquake and Tsunami.

FORM

I. Initiator Identity

1. Name:
2. Name of the Organization:
3. Address

II. Plan of Activities

1. Name of Activity Planned:
2. Location:
3. Description of Activities:
4. Scale of Activities _____ units.
 - Industries: Type, capacity, total raw material used, energy used and water needed.
 - Mining: total land area, potential capacity of mine, area of seismic activity and explosion used.
 - Transportation: Total area, length, depth of pond, total DWT and other item.
 - Agriculture: Total area or activities, processing capacity, total raw material, total energy and water needed.
 - Other activities as needed.
5. The main components of the activities planned.

III. LIST OF TEST

A. Land Use (Tata Ruang)

Criteria of Evaluation	Yes	No	Remark
A-1. Do the activities planned are located in or have direct boundary with : <ol style="list-style-type: none"> a. Sanctuary forest b. Peat region c. Water reservation area d. Border of river e. Region around lake, man-made lake f. Region around water spring g. Natural sanctuary (land) h. Natural sanctuary (in the sea) i. Mangrove forest j. National park k. Forestry park l. Natural tourism park m. Cultural and scientific sanctuary 			

n. Natural disaster Region			
A-2. Is there any conflict in using space with other existing activities or activities in the future?			
<p>B. Land And Soil</p> <p>B-1. Will project acquire land from community or others? If yes, explain the total area needed and procedure of acquisition.</p> <p>B-2. Will the project cause the instability of slope or make dyke with has high risk lead to land slide? If yes, explain the risk process.</p> <p>B-3. Will the project cause change of landscape in big scale or dig and remove the soil to other places? If yes, explain the total area that under change or total volume of the soil removed.</p> <p>B-4. Will the project use agriculture land or forestry land or another productive area? If yes, explain the total area used.</p> <p>B-5. Will the project change coast lines, obstruct drainage, or river current? If yes, explain the total disturbed area; the change permanent or temporary?</p> <p>B-6. Will the project destroy, cover, fill or change the unique landscape permanently? If yes, explain the total area affected and explain the characteristics of the special landscape.</p> <p>B-7. Will the project cause increase of erosion (caused by water or wind)?</p>			
<p>C. Air/Climate</p> <p>C-1. Will the project produce emission which exceeds the environmental standards and affects air quality? If yes, explain the parameters which influence air quality, the distribution of parameters to the surrounding. Explain environmental management measure.</p> <p>C-2. Will the project cause/change wind direction; or air temperature? If yes explain the intensity of the change and its environmental management measure.</p> <p>C-3. Will the project produce/cause the bad smell or ill smelling? If yes, explain the intensity and the distribution of the impact.</p>			
<p>D. Water</p> <p>D-1. Will the project use surface water during the construction and operation? If yes, explain the source of the surface water.</p>			

<p>D-2. Will the project produce liquid waste and discard it to the river, lake, or sea that may cause the change of water quality (temperature, turbidity?). If yes, explain the volume of discarded liquid waste. Is the discarding permanent or temporary? Explain the important parameter which influences water quality and its environmental management measures.</p> <p>D-3. Will the planned activities use ground water? Does water extraction disturb the flow and distribution of ground water? If yes, explain the volume and methods of using ground water; explain also if the project uses ground water permanently or temporary</p> <p>D-4. Will the project lead to construction which disturbs the flow and distribution of ground water? If yes, explain the type of construction and its management effort.</p> <p>D-5. Will the project change ground water quality? If yes, explain the parameters which impact ground water, temporarily or permanently and the area of impact as well as its management measures.</p> <p>D-6. Will the project cause pollution to ground water being used by the community? If yes, explain the distribution of housing which will receive the impact and the management effort.</p> <p>D-7. Will the project produce domestic liquid waste? How much volume? If yes, explain the source and the quantity of the liquid waste and its management measures.</p> <p>D-8. Will the project cause risk of flood? If yes, explain the source of the problem and its management measures.</p>			
<p>E. Solid Waste</p> <p>E-1. Will the project construction activities and project operation produce non hazardous solid waste? In how much quantity? If yes, identify the source and type of wastes; predict the quantity and its management effort.</p> <p>E-2. Will the project during construction and operation produce hazardous solid waste? If yes, identify the source and character of the waste; predict the quantity and its management measures.</p> <p>E-3. Will the waste be processed in the project location (site)? If yes, explain the procedure</p>			

of processing and the location of the plant.			
<p>F. Nuisance, Trembling, Radiation and Blinding.</p> <p>F-1. Will the project make nuisance in the surrounding locations of project during construction and operation? If yes, identify the source of nuisance temporary or permanent, the spread of the nuisance and its management measures.</p> <p>F-2. Will the project cause disturbance of radiation, trembling and blinding? If yes, identify the source, temporary or permanent, the spread of impact and its management measures.</p>			
<p>G. Flora</p> <p>G-1. Will the project change the diversity and/or productivity of the plants; and change the number of the plant species? If yes, identify the rate of change and its management measures.</p> <p>G-2. Will the project influence the habitat of the rare and protected plants? If yes, identify the species of the rare or protected plants, the area of the habitat influenced and its management measures.</p>			
<p>H. Fauna</p> <p>H-1. Will the project influence the habitat of wildlife or protected wildlife? If yes, explain the area of habitat that receives direct impact and indirect impact and identify the wildlife and/or the protected wildlife in the habitat.</p> <p>H-2. Will the project cause introduction of new fauna species to the location of the project? If yes, explain the fauna species and the permission process.</p> <p>H-3. Will the project cause barrier to the migration of animal or fish? If yes identify the species influenced and its management effort.</p> <p>H-4. Will the project disturb the habitat of wildlife and fish? If yes, identify the species and area, characteristic of the habitat and management effort.</p> <p>H-5. Will the project cause emigration of the wildlife from other habitat? If yes, identify the species of wildlife and the location influenced.</p>			
<p>I. Natural Resources</p> <p>I-1. Will the project cause increasing usage of natural resources? If yes, identify the natural</p>			

<p>resources and predict the usage.</p> <p>I-2. Will the project cause a reduction in renewable natural resources? If yes, explain the natural resource and the quantity.</p>			
<p>J. Energy</p> <p>J-1. Will the project use much energy? If yes, explain the need of energy and its source.</p> <p>J-2. Will the project influence the increase of energy used outside of the project location because of the other activities in the future? If yes, predict the quantity of energy needed.</p> <p>J-3. Is it necessary to built new energy plants to fulfill the energy requirements of the project or to anticipate the need of energy for the surrounding of the Project. If yes, explain and predict the capacity.</p>			
<p>K. Transportation</p> <p>K-1. Will the project increase the quality and the mobility of the cars? If yes, explain the increased intensity and identify the influence temporary or permanently.</p> <p>K-2. Will the project influence the existing parking place and need more parking area? If yes, explain the intensity and identify if the influence is temporary or permanent.</p> <p>K-3. Will the project influence the existing transportation system? If yes explain the influenced and its management measures.</p> <p>K-4. Will the project change the circulation of men, materials and service? If yes, explain the influence and minimize the negative impact.</p> <p>K-5. Will the project increase road accidents (motor car, pedestrian and others)? If yes, explain the management effort.</p> <p>K-6. Will the project need new roads? If yes, predict the length and specification of the needed road, and who will construct that new road.</p>			
<p>L. General Facilities</p> <p>L-1. Will the project cause change of geothermal facilities needed services; government institutions (e.g. fire brigade, school, public health centre etc.). f yes, identify the need and who will supply the facilities.</p>			

<p>M. Utilities</p> <p>M-1 Will the project need new facilities constructed or influence the cities' electric supply network, telecommunication network, supply of clean water and drainage system? If yes, identify the affected facilities and the management effort.</p>			
<p>N. Inhabitant</p> <p>N-1 Will the project relocate inhabitants; or change the composition of inhabitants? If yes, explain the number of the people moved and the procedure to minimize the impact</p>			
<p>O. Risk Accident</p> <p>O-1. Will the project cause the risk of contact with hazardous material (petrol, pesticide, chemical radiation or others); when there are accidents or disturbances during project operation? If yes, explain the nature of the hazardous material, the risk, the potential of spreading and its management measures.</p> <p>O-2. Are there any activities like: storage, ejection of hazardous and poisonous material and processes using those materials? If yes, explain the material, the risk and possibility of spreading and it management effort.</p> <p>O-3. Will the project activities (preparation, construction and operation and post operation) have high risk or disaster? If yes, explain the risk and its management.</p> <p>O-4. Is the project vulnerable to accident, because the location of the project in the sensitive area? If yes, explain the risk and its management</p>			
<p>P. Economy</p> <p>P-1. Will the project cause negative impact to the local economy or regional economy?</p> <ul style="list-style-type: none"> - Disturbance to tourism - Disturbance to take home pay - Lowering of land price - Affecting the labor market and cause unemployment. - Movement of the infrastructure of economics, trade and industry. <p>If yes, explain.</p>			
<p>Q. Community Perception</p> <p>Q-1. Will the project planned cause controversy with local community? If yes, explain the kind of controversy and its management measures.</p>			

<p>Q-2. Will the project planned result in conflict with the culture of the local community? If yes, explain.</p> <p>Q-3. Will the project planned cause disturbance to the religion facility? If yes, explain the religion facility and its management effort.</p>			
<p>R. Public Health</p> <p>R-1. Are there any workers from outside of the project location who bring disease? If yes, explain.</p> <p>R-2. If the project relocates the community, does the site of the new housing have high risk in of disease? Explain</p> <p>R-3. Does the project planned increase the burden of the local health facilities (toilet, clean water, etc)? If yes, explain.</p> <p>R-4. Can the project change disease vectors habitat, through:</p> <ul style="list-style-type: none"> a. Change of hydrological system (the velocity of water current, the depth of water, temperature, inundation, etc). b. Change of morphology (the slope, coverage of plantation). c. Climate change (rain fall, climate) d. Biological change (composition of the plant and food web). <p>If yes, explain the change which will be happen, the intensity of the impact and its prevention and management.</p>			
<p>S. Aesthetics</p> <p>S-1. Will the project change the field panorama or change the public space? If yes, explain.</p>			
<p>T. Archeology, cultural preserves and historical sites.</p> <p>T-1. Will the project disturb archeological sites, cultural preserves and historical sites? If yes explain.</p>			

IV. Environmental Impact

Based on the explanation test list above, explain in short and clear the form of:

1. Activities which impact the environment
2. Type of environmental impact
3. The measure of the magnitude of the impact.
4. Other factors which are necessary to be explained pertaining to environment impact to the environment

Source of Impact	Type of Impact	Magnitude of Impact	Remarks
Write down the activities which produce impact.	Write down the environmental issue which will be affected	Write down the measure of the magnitude of impact	Write down any other relevant information.

V. Environmental Management and Monitoring Program (UKL – UPL Program)

Substances of the UKL and UPL are the program Management and Monitoring which will be done during the duration of the project. For that purpose this parts should explain cleanly and completely for all impacts, in accordance test list in the chapter III., as follows :

1. Steps which will conduct to prevent and manage the impact, including the effort to mitigate the emergency / disaster.
2. Monitoring activities which will be done to know the affectivity of the environmental impact and Compliance to the Regulation of Environment.
3. Standard used to measure the effectiveness of the environmental and the compliance to the regulation of environment.

VI. Sign & Seal

After all of the forms about UKL and UPL have been filled completely, the institution(s) responsible for the activities should sign and seal the documents.

Ministry of Environment

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