

スクリーニング様式

案件名：インドネシア国ニアス島橋梁緊急復旧計画予備調査

チェック項目

項目1. プロジェクトサイトの所在地

インドネシア共和国ニアス島の

- グヌンシトリ市 Idano Nou 川河岸
- Gido 区 Idano Gido Si' ite 川河岸
- Idanogawo 区 Idano Gawo 川河岸および Idano Moawu 川河岸
- テルックダラム市 Idano Mezaya 川河岸および Idano Sa' ua 川河岸

項目2. プロジェクトの内容

2-1 以下に掲げるセクターに該当するプロジェクトですか。

■YES □NO

YES の場合、該当するセクターをマークしてください。

- 鉱業開発
- 工業開発
- 火力発電（地熱含む）
- 水力発電、ダム、貯水池
- 河川・砂防
- 送変電・配電
- 道路、鉄道、橋梁
- 空港
- 港湾
- 上水道、下水・廃水処理
- 廃棄物処理・処分
- 農業（大規模な開墾、灌漑を伴うもの）
- 林業
- 水産業
- 観光

2-2 プロジェクトにおいて以下に示す要素が予定想定されていますか。

□YES ■NO

YES の場合、該当するものをマークしてください。

- 大規模非自発的住民移転（規模：世帯人）
- 大規模地下水揚水（規模：m³/年）

- 大規模埋立、土地造成、開墾（規模： ha）
- 大規模森林伐採（規模： ha）

2-3 プロジェクト概要

（プロジェクトの規模、内容）

本プロジェクトは津波および地震の被害を受けた橋梁の復旧工事とする。以下に既存橋梁の建設当時の寸法を示す（出典：BRR 道路橋梁課【Idano Nou A：現地測定値】）。

橋梁名	建設時期	橋長 (m)	幅員 (m)
Idano Nou	1997	45	6
Idano Nou A	-	51	4.6
Idano Gido Si'ite	1997	35	6
Idano Gawo	1997	170	6
Idano Moawu	1992	30	4.3
Idano Mezaya	1992	91.5	4.3
Idano Sa'ua	1996	48.8	3.5

2-4 どのようにしてプロジェクトの必要性を確認しましたか。

プロジェクトは上位計画と整合性がありますか。

■YES：上位計画名を記載してください。

- Reehabilitation and Reconstruction of Nias Islands 2007-2008 Action Plan. March 2007
- Infrastructure Reconstruction Enabling Program -IREP-

□NO

2-5 要請前に代替案を検討しましたか。

■YES：検討した代替案の内容を記載してください。

プロジェクト要請の段階では、復旧計画対象橋梁として、Idano Gawo、O'ou、Muzoi、Lafau、Oyo、Tano Saruru および Siwalawa の7橋梁が挙がっていたが、本予備調査の結果、上記2-3の7橋が選定された。

□NO

2-6 要請前に必要性確認のためのステークホルダー協議を実施しましたか。

■実施済み □実施していない

実施済の場合は該当するステークホルダーをチェックしてください。

- 関係省庁
- 地域住民

N G O

その他 ()

項目 3. プロジェクトは、新規に開始するものですか、既に実施しているものですか。既に実施しているものの場合、現地住民より強い苦情等を受けたことがありますか。

新規

既往 (苦情あり)

既往 (苦情なし)

その他 :

項目 4. 環境影響評価の法律またはガイドラインの名称

- 環境影響評価 (緊急環境省令) : Peraturan Menteri Negara Lingkungan Hidup Nomor 308 Tahun 2006 Tentang Pelaksanaan AMDAL, UKL Dan UPL Untuk Kegiatan Rehabilitasi Dan Rekonstruksi Di Provinsi Naggroe Aceh Darussalam Dan Kepulauan Provinsi Sumatera Utara
- 公共事業セクターにおける AMDAL 制度実施指針 : Peraturan Menteri Pekerjaan Umum Nomor-69/PRT/1995 Tentang Pedoman Teknis AMDAL Proyek Bidang Pekerjaan Umum」
- 公共事業セクターにおけ AMDAL 技術指針 :
 - ◇ Petunjuk Teknis Penyusunan Kerangka Acuan AMDAL Proyek Bidang Pekerjaan Umum (KEPMEN PU No. 147/KPTS/1995)
 - ◇ Keputusan Menteri Pekerjaan Umum Nomor 148/KPTS/1995 Tentang Petunjuk Teknis Penyusunan Rencana Pengelolaan Lingkungan Dan Rencana Pemantauan Lingkungan Proyek Bidang Pekerjaan Umum

プロジェクトに関して、環境影響評価 (EIA、IEE 等) は貴国の制度上必要ですか。

必要

不要

必要な場合、以下の該当する箇所をチェックしてください

IEE のみ必要 (実施済み、 実施中、 実施予定)

IEE と EIA の両方が必要 (実施済み、 実施中、 実施予定)

EIA のみ必要 (実施済み、 実施中、 実施予定)

その他 : 以下に記入してください。

ニアス島での交通整備計画では、復旧計画特殊法の規定による緩和された環境影響評価制度が適用されるため、本プロジェクトにて選定された橋梁の復旧計画に係り、環境影響評価 (EIA) における手続きは、通常の制度と比較して、公聴会の免除を含む時間短縮された形式で実施される予定である。

EIA における手続きには環境管理計画書および環境モニタリング計画書の提出が必要であり、所轄地域開発企画庁 (BAPPEDA) の環境影響評価担当部署が当該窓口となり、その許認可プロセスは最終的に、メダン所在の環境影響管理庁 (BAPEDAL) によって可決・監査されることとなる。

項目 5. 環境影響評価が既に実施されている場合、環境影響評価は環境影響評価制度に基づき審査・承認を受けていますか。既に承認されている場合、承認年月日、承認機関について記載してください。

- 承認済み（附帯条件なし） 承認済み（附帯条件あり） 審査中
（承認年月日：承認機関：）
手続きを開始していない
その他（ ）

項目 6. 環境影響評価以外の環境や社会面に関する許認可が必要な場合、その許認可名を記載してください。

- 取得済み 取得必要だが未取得
許認可名：（ ）
取得不要
その他（ ）

項目 7. 事業対象地内または周辺域に以下に示す地域がありますか。

- YES NO 分からない

YES の場合、該当するものをマークしてください。

- 国立公園、国指定の保護対象地域（国指定の海岸地域、湿地、少数民族・先住民族のための地域、文化遺産等）及びそれに準じる地域
原生林、熱帯の自然林
生態学的に重要な生息地（サンゴ礁、マングローブ湿地、干潟等）
国内法、国際条約等において保護が必要とされる貴重種の生息地
大規模な塩類集積あるいは土壌浸食の発生する恐れのある地域
砂漠化傾向の著しい地域
考古学的、歴史的、文化的に固有の価値を有する地域
少数民族あるいは先住民族、伝統的な生活様式を持つ遊牧民の人々の生活区域、もしくは特別な社会的価値のある地域

項目 8. プロジェクトは環境社会影響を及ぼす可能性がありますか。

- YES NO 分からない

理由：本プロジェクトの実施に係り以下の影響を及ぼす可能性がある。

【大気汚染】建設工事期間中およびその後の維持管理に必要とするアスファルトが現地調達される場合は、当該工場の排ガスにて周辺の大気質への影響が懸念される。

【水質汚濁】建設工事期間中に利用される資材（砂、砂利、岩石）の河底採掘より、河川の水質への影響が懸念される。この問題は現在、プロジェクト対象橋梁が跨る Idano Gawo 川および Idano Sa' ua 川で顕在化している。一方、建設工事期間中の河川での土木工事による水質汚濁問題が懸念される。

【騒音・振動】建設工事期間中およびその後の維持管理中に建設機械が発する騒音および振動による周辺生活環境への影響を与える可能性がある。特に、人口および交通量の多い場所では、著しい影響が懸念される。

【非自発的住民移転】既存橋梁の移設工事、拡張・拡幅工事を伴う場合には、土地の収用および非自発的住民移転の必要性による社会経済的問題が懸念される。

【地域経済：雇用、生計】建設工事期間中に、島外から高技能、高収入労働者が派遣され、これらによる需要増が起因する局所的な物価上昇が生じ、周辺住民への経済的な影響が懸念される。

【社会的脆弱者および利益／損失の配分の不公平】建設工事期間中に外部から派遣される土木工事の労働者による地域のライフスタイルおよび倫理における影響が懸念される。また、迂回路工事より、対象区域の経済活動（主に果樹農業）への影響が懸念される。

【ジェンダー、子供の権利】建設工事期間中に河川での砂および岩石の採掘事業に務める女性および子供の労働時間が増加すると懸念される。

項目 9. 関係する主要な環境社会影響をマークし、その概要を説明してください。

- | | |
|--|---|
| <input type="checkbox"/> 大気汚染 | <input type="checkbox"/> 雇用や生計手段等の地域経済 |
| <input checked="" type="checkbox"/> 水質汚濁 | <input type="checkbox"/> 土地利用や地域資源利用 |
| <input type="checkbox"/> 土壌汚染 | <input type="checkbox"/> 社会関係資本や地域の意思決定機関等の社会組織 |
| <input type="checkbox"/> 廃棄物 | <input type="checkbox"/> 既存の社会インフラや社会サービス |
| <input checked="" type="checkbox"/> 騒音・振動 | <input type="checkbox"/> 貧困層・先住民・少数民族 |
| <input type="checkbox"/> 地盤沈下 | <input type="checkbox"/> 被害と便益の偏在 |
| <input type="checkbox"/> 悪臭 | <input type="checkbox"/> 地域内の利害対立 |
| <input type="checkbox"/> 地形・地質 | <input type="checkbox"/> ジェンダー |
| <input type="checkbox"/> 底質 | <input type="checkbox"/> 子どもの権利 |
| <input type="checkbox"/> 生物・生態系 | <input type="checkbox"/> 文化遺産 |
| <input type="checkbox"/> 水利用 | <input type="checkbox"/> HIV/AIDS 等の感染症 |
| <input type="checkbox"/> 事故 | <input type="checkbox"/> その他（ ） |
| <input type="checkbox"/> 地球温暖化 | |
| <input checked="" type="checkbox"/> 非自発的住民移転 | |

関係する環境社会影響の概要：本プロジェクト対象の橋梁周辺の環境社会の特徴を下表にまとめる。

橋梁名	位置	備考
Idano Nou	ニアス県グヌンシトリ市 (都市部河口域)	グヌンシトリ都市計画案の中心地にある商業地区（交通量：大）
Idano Nou-A	ニアス県グヌンシトリ市 (都市部沿岸)	
Idano Gido Si'ite	ニアス県 Gido 村（農村地帯）	洪水被害に脆弱な地域
Idano Gawo	ニアス県 Idanogawo 村 (農村地帯)	<ul style="list-style-type: none"> ● 橋梁の上下流域にて砂、岩石の採掘実施 ● 南東端にアスファルト工場が存在、小規模果樹農業
Idano Moawu	ニアス県 Idanogawo 村 (農村地帯)	<ul style="list-style-type: none"> ● 橋梁周辺で小規模の果樹農業 ● 南東にキリスト協会
Idano Mezaya	南ニアス県テルックダラム市 (農村地帯沿岸)	上中流域が溪谷地形となっているため、射流洪水に脆弱な区域の下流にある。
Idano Sa'ua	南ニアス県テルックダラム市 (農村地帯沿岸)	橋梁の周辺にて砂、岩石の採掘実施（女性、子供：多）

項目 10. 情報公開と現地ステークホルダーとの協議

10-1 環境社会配慮が必要な場合、JICA 環境社会配慮ガイドラインに従って情報公開や現地ステークホルダーとの協議を行うことに同意しますか。

■YES □NO

10-2 NO の場合、その理由は何ですか？

現地調査票

以下のスコーピング・チェックリストに基づいて本プロジェクト実施における主な当該影響項目について調査を行った。

SCOPING CHECKLIST

Instructions

This checklist is designed to help users identify the likely significant environmental effects of proposed projects during scoping. It is to be used in conjunction with the Checklist of Criteria for Evaluating the Significance of Impacts. There are two stages:

- first, identifying the potential impacts of projects;
- second selecting those which are likely to be significant and therefore require most attention in the assessment.

A useful way of identifying the potential impacts of a project is to identify all the activities or sources of impact that could arise from construction, operation or decommissioning of the project, and to consider these alongside the characteristics of the project environment that could be affected, to identify where there could be interactions between them. The two parts of the Scoping Checklist have been developed to assist in this process.

Start with the checklist of questions set out below. Complete Column 2 by answering:

- yes - if the activity is likely to occur during implementation of the project;
- no - if it is not expected to occur;
- ? - if it is uncertain at this stage whether it will occur or not.

For each activity for which the answer in Column 2 is “Yes” or “?”, refer to the second part of the Scoping Checklist which lists characteristics of the project environment which could be affected, and identify any which could be affected by that activity. Information will be needed about the surrounding environment in order to complete this stage. Note the characteristics of the project environment that could be affected, and the nature of the potential effects in Column 3.

Finally, use Checklist of Criteria for Evaluating the Significance of Impacts to help complete Column 4. This will identify those impacts which are expected to be significant. The questions are designed so that a “yes” answer will point towards a significant impact. It is often difficult to decide what is or is not significant but a useful simple check is to ask whether the effect is one that is of sufficient importance that it ought to be considered and have an influence on the development consent decision. As much information as possible about the degree of significance should be included in Column 4 as a guide for planning the environmental studies.

Some examples illustrating how to use the checklist are given below.

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project Environment could be affected?	Is the effect likely to be significant? Why?
1.	Will the project involve any actions during construction, operation or decommissioning which would create changes in the locality as a result of the nature, scale, form or purpose of the new development?			

1.6	Demolition works?	yes	Will require demolition of 2 historic buildings	Yes - Buildings are nationally designated
1.11	Dredging?	yes	Will involve dredging of canal to create new waterfront	No - Canal is regularly dredged anyway
2. Will the project use any natural resources, especially any resources which are non-renewable or in short supply?				
2.4	Aggregates?	Yes	Creation of development platform will use large amount of imported material – soil and aggregate. Indirect effect at extraction sites which are in greenfield area	Yes – major change in environment at extraction sites. Impact on large numbers of people nearby. Will place major strain on local supplies
3. Will the project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?				
3.4	Are there especially vulnerable groups of people who could be affected by the project eg hospital patients, the elderly?	Yes	Project location is adjacent to regional hospital and long term care centre. Potential for significant noise and other disturbance during construction	Yes - Hospital environment may become much noisier over one year construction period.
4. Will the project produce solid wastes during construction or operation or decommissioning?				
4.2	Municipal waste (household and or commercial wastes)?	Yes	New population will generate household and other wastes	No- there is ample local waste management capacity
5. Will the project release pollutants or any hazardous, toxic or noxious substances to air?				
5.5	Dust or odours from handling of materials including construction materials, sewage and waste?	yes	Earth moving during construction could be dusty in dry climate and affect neighbouring habitats and residents	Yes - Habitat is internationally protected and vulnerable to dust deposition. Condition of hospital patients could be worsened by exposure to dust
6. Will the project cause noise and vibration or release of light, heat energy or electromagnetic radiation?				
6.5	From construction or operational traffic?	yes	Heavy traffic flows for import of material during construction affecting residents and hospital	Yes – noise levels already elevated by traffic and industry
7. Will the project lead to risks of contamination of land or water from releases of pollutants onto the ground or into sewers, surface waters, groundwater, coastal waters or the sea?				
7.2	From discharge of sewage or other effluents (whether treated or untreated) to water or the land?	Yes	Increase in municipal sewage flows from new residents	Possibly – depends on requirement for new treatment facilities
8. Is there a risk of accidents during construction or operation of the project which could affect human health or the environment?				
8.4	Could the project be affected by natural disasters causing environmental damage (eg floods, earthquakes, landslip, etc)?	yes	Development is within floodplain	Yes – Government policy cautions against development in areas susceptible to flooding
9. Will the project result in social changes?				

9.1	Changes in population size, age, structure, social groups etc?	yes	New population of 10,000 will increase number in immediate area from 5,000 to 15,000 and change character from rural to urban environment. Will affect existing community, cultural identity and economic conditions and introduce differential housing conditions	Yes – local community is small scale and well-established with strong community institutions and identity
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When using this [Scoping Checklist](#) it is important to remember that **secondary and higher order effects** can occur as a result of a **primary interaction** between a project activity and the project environment. So for example, a change in site run-off can affect the hydrology of a watercourse; this can subsequently affect water quality and the ecology of the watercourse; and this can then affect fishing and other uses of the water. Where a primary effect is identified the user should always think about whether secondary or further effects on other aspects of the environment could arise as a result.

Users should also remember that effects can occur not only **permanently** and over the **long term** but also **temporarily**, for example just during construction, commissioning or decommissioning or just during certain phases of project operation, or that may occur only **intermittently**, for example during certain periods of activity or times of year or as a **result of abnormal events** affecting the project (accidents, freak weather conditions, earthquakes, etc.).

The Directive also requires EIA to consider effects that could arise **indirectly** from the project, for example as a result of other development which takes place as a consequence of the project e.g. to provide access, power or water supplies, sewage treatment or waste disposal, or to house or provide jobs for people attracted to the area by the project. It also requires consideration of **cumulative effects** that could arise from a combination of the project's effects with those of other existing or planned developments in the surrounding area. Further guidance is available from the Commission in "Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions". This document can be viewed at <http://europa.eu.int/comm/environment/eia/eia-studies-and-reports/guidel.pdf>.

A convenient way of thinking about this checklist is to visualise the two parts as the vertical and horizontal axes of a virtual matrix. The lists are too long to be practically presented as a real matrix and even if they could be the individual cells in the matrix would be too small to contain any useful information about the nature or significance of the effects, but the concept is a useful one when thinking about scoping.

Further instructions for using the second part of the checklist are given at the beginning of the [Checklist of Criteria for Evaluating the Significance of Impacts](#).

Part 1 of The Scoping Checklist: QUESTIONS ON PROJECT CHARACTERISTICS

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
1. Will construction, operation or decommissioning of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in waterbodies, etc)?				
1.1	Permanent or temporary change in land use, landcover or topography including increases in intensity of land use?			
1.2	Clearance of existing land, vegetation and buildings?			
1.3	Creation of new land uses?			
1.4	Pre-construction investigations eg boreholes, soil testing?			

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
1.5	Construction works?			
1.6	Demolition works?			
1.7	Temporary sites used for construction works or housing of construction workers?			
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations?			
1.9	Underground works including mining or tunnelling?			
1.10	Reclamation works?			
1.11	Dredging?			
1.12	Coastal structures <i>eg</i> seawalls, piers?			
1.13	Offshore structures?			
1.14	Production and manufacturing processes?			
1.15	Facilities for storage of goods or materials?			
1.16	Facilities for treatment or disposal of solid wastes or liquid effluents?			
1.17	Facilities for long term housing of operational workers?			
1.18	New road, rail or sea traffic during construction or operation?			
1.19	New road, rail, air, waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?			
1.20	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?			
1.21	New or diverted transmission lines or pipelines?			
1.22	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?			

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
1.23	Stream crossings?			
1.24	Abstraction or transfers of water from ground or surface waters?			
1.25	Changes in waterbodies or the land surface affecting drainage or run-off?			
1.26	Transport of personnel or materials for construction, operation or decommissioning?			
1.27	Long term dismantling or decommissioning or restoration works?			
1.28	Ongoing activity during decommissioning which could have an impact on the environment?			
1.29	Influx of people to an area in either temporarily or permanently?			
1.30	Introduction of alien species?			
1.31	Loss of native species or genetic diversity?			
1.32	Any other actions?			

2. Will construction or operation of the Project use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or in short supply?

2.1	Land especially undeveloped or agricultural land?			
2.2	Water?			
2.3	Minerals?			
2.4	Aggregates?			
2.5	Forests and timber?			
2.6	Energy including electricity and fuels?			
2.7	Any other resources?			

3. Will the Project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
3.1	Will the project involve use of substances or materials which are hazardous or toxic to human health or the environment (flora, fauna, water supplies)?			
3.2	Will the project result in changes in occurrence of disease or affect disease vectors (eg insect or water borne diseases)?			
3.3	Will the project affect the welfare of people eg by changing living conditions?			
3.4	Are there especially vulnerable groups of people who could be affected by the project eg hospital patients, the elderly?			
3.5	Any other causes?			
4. Will the Project produce solid wastes during construction or operation or decommissioning?				
4.1	Spoil, overburden or mine wastes?			
4.2	Municipal waste (household and or commercial wastes)?			
4.3	Hazardous or toxic wastes (including radioactive wastes)?			
4.4	Other industrial process wastes?			
4.5	Surplus product?			
4.6	Sewage sludge or other sludges from effluent treatment?			
4.7	Construction or demolition wastes?			
4.8	Redundant machinery or equipment?			
4.9	Contaminated soils or other material?			
4.10	Agricultural wastes?			
4.11	Any other solid wastes?			
5. Will the Project release pollutants or any hazardous, toxic or noxious substances to air?				
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources?			

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
5.2	Emissions from production processes?			
5.3	Emissions from materials handling including storage or transport?			
5.4	Emissions from construction activities including plant and equipment?			
5.5	Dust or odours from handling of materials including construction materials, sewage and waste?			
5.6	Emissions from incineration of waste?			
5.7	Emissions from burning of waste in open air (eg slash material, construction debris)?			
5.8	Emissions from any other sources?			
6. Will the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?				
6.1	From operation of equipment eg engines, ventilation plant, crushers?			
6.2	From industrial or similar processes?			
6.3	From construction or demolition?			
6.4	From blasting or piling?			
6.5	From construction or operational traffic?			
6.6	From lighting or cooling systems?			
6.7	From sources of electromagnetic radiation (consider effects on nearby sensitive equipment as well as people)?			
6.8	From any other sources?			
7. Will the Project lead to risks of contamination of land or water from releases of pollutants onto the ground or into sewers, surface waters, groundwater, coastal waters or the sea?				
7.1	From handling, storage, use or spillage of hazardous or toxic materials?			
7.2	From discharge of sewage or other effluents (whether treated or untreated) to water or the land?			

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
7.3	By deposition of pollutants emitted to air, onto the land or into water?			
7.4	From any other sources?			
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?			
8. Will there be any risk of accidents during construction or operation of the Project which could affect human health or the environment?				
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous or toxic substances?			
8.2	From events beyond the limits of normal environmental protection eg failure of pollution control systems?			
8.3	From any other causes?			
8.4	Could the project be affected by natural disasters causing environmental damage (eg floods, earthquakes, landslip, etc)?			
9. Will the Project result in social changes, for example, in demography, traditional lifestyles, employment?				
9.1	Changes in population size, age, structure, social groups etc?			
9.2	By resettlement of people or demolition of homes or communities or community facilities eg schools, hospitals, social facilities?			
9.3	Through in-migration of new residents or creation of new communities?			
9.4	By placing increased demands on local facilities or services eg housing, education, health?			
9.5	By creating jobs during construction or operation or causing the loss of jobs with effects on unemployment and the economy?			
9.6	Any other causes?			
Question - Are there any other factors which should be considered such as consequential development which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality?				
9.1	Will the project lead to pressure for consequential development which could have significant impact on the environment eg more housing, new roads, new supporting industries or utilities, etc?			

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
9.2	Will the project lead to development of supporting facilities, ancillary development or development stimulated by the project which could have impact on the environment eg: <ul style="list-style-type: none"> • supporting infrastructure (roads, power supply, waste or waste water treatment, etc) • housing development • extractive industries • supply industries • other? 			
9.3	Will the project lead to after-use of the site which could have an impact on the environment?			
9.4	Will the project set a precedent for later developments?			
9.5	Will the project have cumulative effects due to proximity to other existing or planned projects with similar effects?			

PART 2 OF THE SCOPING CHECKLIST: CHARACTERISTICS OF THE PROJECT ENVIRONMENT

For each project characteristic identified in Part consider whether any of the following environmental components could be affected.

QUESTION - ARE THERE FEATURES OF THE LOCAL ENVIRONMENT ON OR AROUND THE PROJECT LOCATION WHICH COULD BE AFFECTED BY THE PROJECT?

- Areas which are protected under international or national or local legislation for their ecological, landscape, cultural or other value, which could be affected by the project?
- Other areas which are important or sensitive for reasons of their ecology e.g.
 - Wetlands,
 - Watercourses or other waterbodies,
 - the coastal zone,
 - mountains,
 - forests or woodlands
- Areas used by protected, important or sensitive species of fauna or flora e.g. for breeding, nesting, foraging, resting, overwintering, migration, which could be affected by the project?
- Inland, coastal, marine or underground waters?
- Areas or features of high landscape or scenic value?
- Routes or facilities used by the public for access to recreation or other facilities?
- Transport routes which are susceptible to congestion or which cause environmental problems?
- Areas or features of historic or cultural importance?

1.1. Question - Is the Project in a location where it is likely to be highly visible to many people?

Question - Is the Project located in a previously undeveloped area where there will be loss of greenfield land?

Question - Are there existing land uses on or around the Project location which could be affected by the Project? For example:

- Homes, gardens, other private property,
- Industry,
- Commerce,
- Recreation,
- public open space,
- community facilities,
- agriculture,
- forestry,
- tourism,
- mining or quarrying

Question - Are there any plans for future land uses on or around the location which could be affected by the Project?

Question - Are there any areas on or around the location which are densely populated or built-up, which could be affected by the Project?

Question - Are there any areas on or around the location which are occupied by sensitive land uses which could be affected by the Project?

- hospitals,
- schools,
- places of worship,
- community facilities

Question - Are there any areas on or around the location which contain important, high quality or scarce resources which could be affected by the Project? For example:

- groundwater resources,
- surface waters,
- forestry,
- agriculture,
- fisheries,
- tourism,
- minerals.

Question - Are there any areas on or around the location of the Project which are already subject to pollution or environmental damage e.g. where existing legal environmental standards are exceeded, which could be affected by the project?

Question - Is the Project location susceptible to earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions e.g. temperature inversions, fogs, severe winds, which could cause the project to present environmental problems?

Question - Is the Project likely to affect the physical condition of any environmental media?

- The atmospheric environment including microclimate and local and larger scale climatic conditions?
- Water - eg quantities, flows or levels of rivers, lakes, groundwater. Estuaries, coastal waters or the sea?
- Soils - eg quantities, depths, humidity, stability or erodibility of soils?
- Geological and ground conditions?

Question - Are releases from the Project likely to have effects on the quality of any environmental media?

- Local air quality?
- Global air quality including climate change and ozone depletion
- Water quality – rivers, lakes, groundwater. Estuaries, coastal waters or the sea?
- Nutrient status and eutrophication of waters?
- Acidification of soils or waters?
- Soils
- Noise?
- Temperature, light or electromagnetic radiation including electrical interference?
- Productivity of natural or agricultural systems?

Question - Is the Project likely to affect the availability or scarcity of any resources either locally or globally?

- Fossil fuels?
- Water?
- Minerals and aggregates?
- Timber?
- Other non-renewable resources?
- Infrastructure capacity in the locality - water, sewerage, power generation and transmission, telecommunications, waste disposal roads, rail?

Question - Is the Project likely to affect human or community health or welfare?

- The quality or toxicity of air, water, foodstuffs and other products consumed by humans?
- Morbidity or mortality of individuals, communities or populations by exposure to pollution?
- Occurrence or distribution of disease vectors including insects?
- Vulnerability of individuals, communities or populations to disease?
- Individuals' sense of personal security?
- Community cohesion and identity?
- Cultural identity and associations?
- Minority rights?
- Housing conditions?
- Employment and quality of employment?
- Economic conditions?
- Social institutions?

本プロジェクトの実施において適用される北スマトラ州のアチェおよびニマス島の復旧および再建事業における環境影響評価（AMDAL）制度、2005年の環境省令第308号（*Peraturan Menteri Negara Lingkungan Hidup Nomor 308 Tahun 2006 Tentang Pelaksanaan AMDAL, UKL Dan UPL Untuk Kegiatan Rehabilitasi Dan Rekontruksi Di Provinsi Naggroe Aceh Darussalam Dan Kepulauan Provinsi Sumatera Utara*）による環境影響評価申請書（英語版）を添付する。

**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 interdisciplinary 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 			

<p>n. Natural disaster Region</p>			
<p>A-2. Is there any conflict in using space with other existing activities or activities in the future?</p>			
<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 its 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 clearly 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

Rachmat Witoelar

資料リスト(■収集資料/□専門家作成資料)

	プロジェクトID	調査団番号	調査の種類又は指導科目	予備調査	担当部課	無償資金協力部			
地域	アジア	ニース島橋梁緊急復旧計画予備調査	調査の種類又は指導科目	予備調査	担当部課	無償資金協力部			
国名	インドネシア	配属機関名	現地調査期間又は派遣期間	平成19年7月4日～8月4日	担当者氏名	中川 淳史			
番号	資料の名称	形態(図書、ビデオ、地図、写真等)	収集資料	専門家作成資料	JICA作成資料	テキスト	発行機関	取扱区分	図書館記入欄
T-1	Nias Statical Data 2006	CD	*				Badan Pusat Statistik Kabupaten Nias	JR・CR()・SC	
T-2	Nias Selatan Statical Data 2006	CD	*				Badan Pusat Statistik Kabupaten Nias Selatan	JR・CR()・SC	
T-3	BRR Perwakilan Nias 2005-2006 (2006年までのBRR実績)	書籍	*				BRR	JR・CR()・SC	
T-4	Nias Map (Scal: 1/50,000)	CD	*				BAPPEDA Medan	JR・CR()・SC	
T-5	Draft Road Standards Study June 2007	コピー	*				BRR	JR・CR()・SC	
T-6	2007-2008 Action Plan (BRRの実績と行動計画)	コピー	*				BRR	JR・CR()・SC	
T-7	Nias Road and Bridge Program (交通量調査)	CD	*				BRR	JR・CR()・SC	
T-8	ニース島大地震緊急災害インフラ復旧プロジェクト報告書	コピー	*				(社) 国際建設技術協会	JR・CR()・SC	

資料リスト(■収集資料/□専門家作成資料)

地域	アジア	プロジェクトID	調査団番号	予備調査	無償資金協力部
国名	インドネシア	調査団名又は 専門家氏名	調査の種類又は指導 科目	平成19年7月5日～8月4日	担当者氏名
		配属機関名	現地調査期間又は 派遣期間		中川 淳史

番号	資料の名称	形態(図書、ビデオ、地図、写真等)	収集資料	専門家作成資料	JICA作成資料	追加	発行機関	取扱区分	図書館記入欄
E-1	Nias in Figures 2006	CD	*				Badan Pusat Statistik Kabupaten Nias	JR-CR() SC	
E-2	Nias Selatan in Figures 2006	CD	*				Badan Pusat Statistik Kabupaten Nias Selatan	JR-CR() SC	
E-3	Produk Tata Ruang Wilayah BRR Nad-Nias 2006	CD	*				BRR	JR-CR() SC	
E-4	Rehabilitation and Reconstruction of Nias Islands 2007-2008 Action Plan. March 2007	CD	*				BRR	JR-CR() SC	
E-5	Nias PDCS. Draft Road Design Standards Study. June 2007	CD	*				DHV Consultants, BRR. Multi Donor Fund for Aceh and Nias	JR-CR() SC	
E-6	AMDAL Reform and Decentralization - Opportunities for Innovation in Indonesia. 2007	CD	*				The World Bank	JR-CR() SC	
E-7	Bioregions. 2007	CD	*				WHALHI	JR-CR() SC	
E-8	No. 48 Tahun 1996 Tentang : Baku Tingkat Kebisingan	CD	*				Keputusan Menteri Negara Lingkungan Hidup	JR-CR() SC	
E-9	No. 49 Tahun 1996 Tentang : Baku Tingkat Getaran	CD	*				Keputusan Menteri Negara Lingkungan Hidup	JR-CR() SC	
E-10	LAW CONCERNING ENVIRONMENTAL MANAGEMENT Law No. 23 of 1997	CD	*				State Gazette Republic of Indonesia Number 3699	JR-CR() SC	
E-11	NOMOR 27 TAHUN 1999 TENTANG ANALISIS MENGENAI DAMPAK LINGKUNGAN HIDUP	CD	*				PERATURAN PEMERINTAH REPUBLIK INDONESIA	JR-CR() SC	

資料リスト(■収集資料/□専門家作成資料)

地域	プロジェクトID	調査団番号	調査の種類又は指導科目	予備調査	担当部課	無償資金協力部			
アジア	ニアス島橋梁緊急復旧計画予備調査		現地調査期間又は派遣期間	平成19年7月5日～8月4日	担当者氏名	中川 淳史			
国名	インドネシア	配属機関名							
番号	資料の名称	形態(図書、ビデオ、地図、写真等)	収集資料	専門家作成資料	JICA作成資料	発外	発行機関	取扱区分	図書館記入欄
E-12	NOMOR 41 TAHUN 1999 TENTANG PENGENDALIAN PENCEMARAN UDARA	CD	*				PERATURAN PEMERINTAH REPUBLIK INDONESIA	JR-CR()・SC	
E-13	NOMOR : 08 TAHUN 2000 TENTANG KETERLIBATAN MASYARAKAT DAN KETERBUKAAN INFORMASI DALAM PROSES ANALISIS MENGENAI DAMPAK LINGKUNGAN HIDUP	CD	*				BADAN PENGENDALIAN DAMPAK LINGKUNGAN	JR-CR()・SC	
E-14	NOMOR 82 TAHUN 2001 TENTANG PENGELOLAAN KUALITAS AIR DAN PENGENDALIAN PENCEMARAN AIR	CD	*				PERATURAN PEMERINTAH REPUBLIK INDONESIA	JR-CR()・SC	
E-15	NOMOR 308 TAHUN 2005 TENTANG PLAKSANAAN AMDAL, UPL DAN UPL UNTUK KEGIATAN R & R DI PROVINSI NAD DAN NIAS	CD	*				PERATURAN MENTERI NEGARA LINGKUNGAN HIDUP	JR-CR()・SC	
E-16	Implementation of EIA, UPL and UKL for rehabilitation and reconstruction activities in NAD province and island of NIAS	CD	*				MINISTRY OF ENVIRONMENT DECREE	JR-CR()・SC	