# CHAPTER 4

# PRE- SUBMISSION STAGE OF EIA REPORT

## 4.1 Screening

Prior to conducting an EIA study, the Project Proponent and the Qualified Person (i.e. the EIA Consultant) shall carry out the screening process to determine whether a proposed project is a prescribed activity under the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order, 2015. The Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order, 2015 is reproduced in **Appendix 6**. The EIA Consultant needs to determine which Schedule the proposed project falls under: the First Schedule or the Second Schedule. The EIA for First Schedule projects follows a different EIA procedure from the EIA for Second Schedule projects, as described in Chapter 3.

The Case Where the Proposed Project Has More Than One Prescribed Activity

If the proposed project consists of more than one prescribed activity and one of them falls under the Second Schedule, then the project as a whole shall be considered to fall under the Second Schedule of the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order, 2015.

## 4.2 Scoping and Terms of Reference

The scoping process to identify the impacts of specific projects on the environment shall follow the EIA guidelines for specific projects issued by the DOE. An example of environmental assessment matrix to assist the Project Proponent and the EIA Consultant to identify significant impacts of projects is given in **Appendix 7**. From the scoping process the EIA Consultant then prepares an Environmental Scoping Information (ESI) that determines the proposed Terms of Reference (TOR) for the EIA study. The general requirements for scoping process and TOR preparation shall follow those described in Chapter 3.

### 4.2.1 Terms of Reference for Activities Falling Under the First Schedule

For prescribed activities that fall under the First Schedule, the EIA Consultant shall prepare an Environmental Scoping Information (ESI) that determines the proposed - Terms of Reference (TOR) for the EIA study and submit it to the DOE State Office for endorsement. The ESI and TOR will be assessed and endorsed by the Director of DOE State Office either through a TORAC meeting or mail correspondence, whichever deemed appropriate. Subsequently, when the EIA Report has been prepared, it shall be submitted to the relevant DOE state office for review, as described in Chapter 3.

#### 4.2.1.1 Terms of References (TOR) Review Procedure

The output of scoping exercise is the terms of reference (TOR). The Project Proponent shall first submit to the DOE the TOR together with the Environmental Scoping Information (ESI), in accordance with the format outlined in the Guidance Document For Preparing Terms Of Reference (TOR) and/or specific EIA guidelines (if available) for endorsement. **Appendix 8** gives a general guidance on scoping and also the general contents of TOR which shall be followed in the TOR formulation.

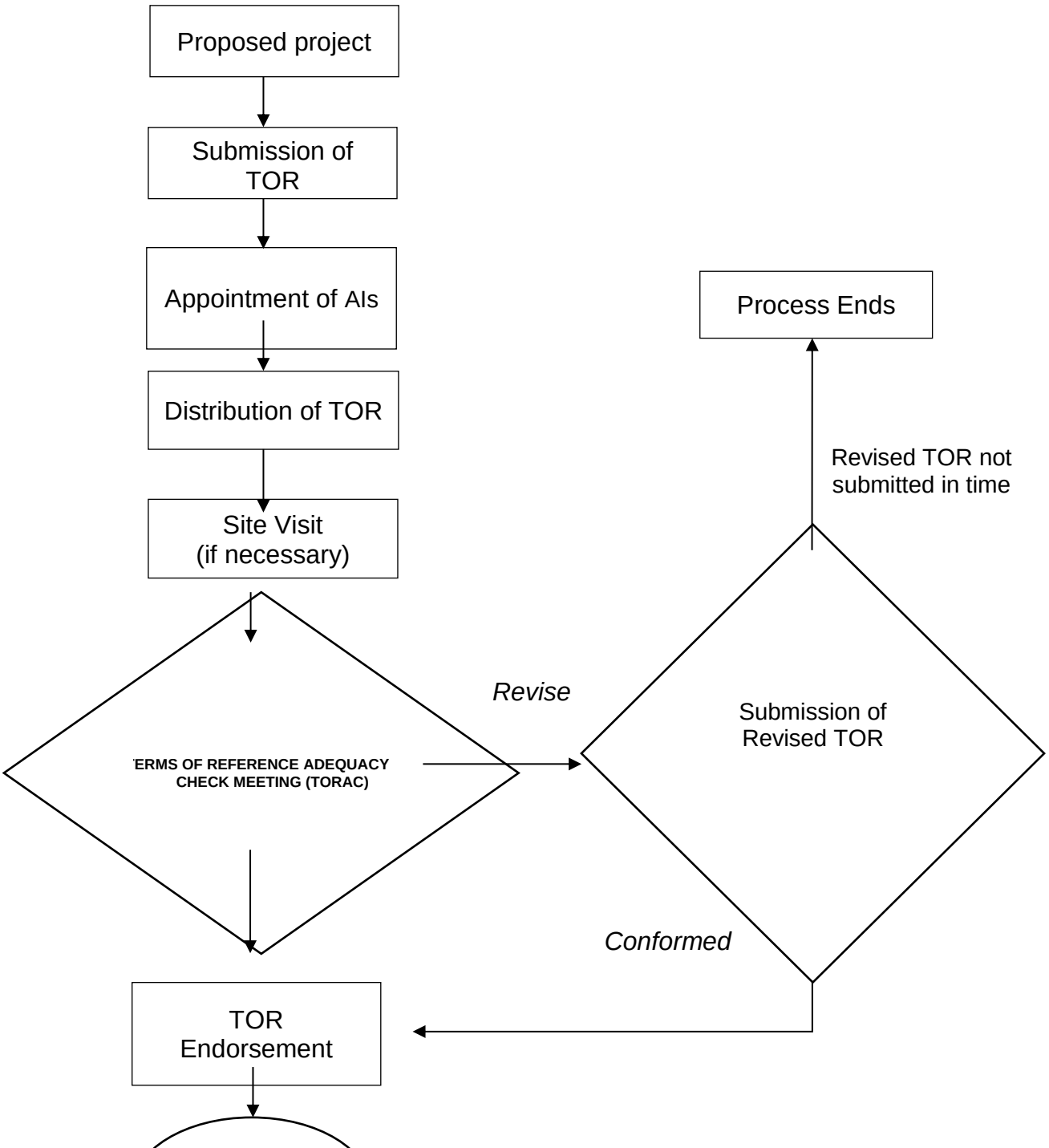
The review of the TOR is carried out by the EIA Technical Review Committee (EIATRC) comprised of TRC members (a team of DOE officers at the State Office), and may include individuals who are specifically appointed (AIs) on an ad hoc basis from within or outside of the DOE as well as representatives from government agencies (GAs).

The TOR review involving parties outside of the DOE shall be done either through a Terms of Reference Adequacy Check (TORAC) meeting or by submission of comments through mail correspondence.

Non-Governmental Organizations (NGOs) may also be invited to the TORAC meeting (or requested comments through mail) as general representatives or as Appointed Individuals (AIs). The AIs are individuals who have vast technical experiences in the relevant areas related to the proposed project, which may include potential project environmental impacts, impact study methodologies, and applicable pollution prevention and mitigation measures. The same personnel (i.e. TRC members and AIs) will also serve as the committee for reviewing the EIA Reports.

The adequacy of the scoping coverage and the TOR formulated will be decided in a Terms of Reference Adequacy Check (TORAC) meeting which will be chaired by the State Director of the DOE. The TORAC meeting members comprise the TRC members, and may include AIs and GAs, as well as NGOs as deemed appropriate. At this meeting, the TOR may be accepted or agreed upon or it may require a revision.

Figure 4.1 shows the procedural steps for submission of TOR.



**NOTE:**
Process ends when Revised TOR is not submitted within timeframe by the Project Proponent

The TOR review process involves the following:

**Figure 4.1: Procedural steps for assessment of EIA Report for First Schedule Activities – TOR Adequacy Check Stage**

(i) The review process will be completed within a period of 3 weeks (30 working days) and an additional of two weeks (10 working days) for submission of revised TOR.

(ii) A minimum of 3 hard copies and 1 softcopy (in PDF format) of the draft TOR shall be submitted to the DOE HQ. Additional copies are to be submitted whenever necessary. Through the Project Proponent, the TRC (DOE Headquarters) will distribute the Report to the relevant government agencies (GAs) and appointed individuals (AIs) for the purpose of the TORAC meeting or submission of comments through mail correspondence.

(iii) A visit to the project site by the DOE and appointed individuals (AIs) may be required, which shall be arranged by the Consultant through the TRC.

(iv) The TORAC meeting will be conducted (as and when necessary), after the site visit normally within the third week from date of submission of the TOR to DOE. At this meeting, the proposed TOR will be presented by the Project Proponent and his Consultant to the TORAC meeting when deemed necessary. Otherwise the TOR review decision will be issued through mail correspondence.

(v) The outcome of the TOR review may lead to:

(a) Acceptance of the TOR, provided:

- The TOR is in line with the specific EIA guidelines (if

available) and/or the contents of the TOR specified in **Appendix 8**.

- Recommendations from the TORAC meeting members or mailed comments have been accepted or agreed upon.

(b) Revision of TOR, where:

- The TOR is not in line with the specific EIA guidelines (if available) and/or the contents of the TOR specified in **Appendix 8**.
- There is need to provide additional information to clarify any unresolved or outstanding matters arising during the review process. The additional scope shall be submitted at least two weeks before the processing time ends. If the additional scope or revised TOR is not submitted within the time frame, the process will end and new submission is required if the relevant party is still interested.

### 4.2.2 Terms of Reference for Activities Falling Under the Second Schedule

For prescribed activities that fall under the Second Schedule, the EIA Consultant shall prepare an Environmental Scoping Information (ESI) that determines the proposed - Terms of Reference (TOR) for the EIA study and submit it to the DOE Headquarters for endorsement. The same procedure applies to a prescribed activity that traverses two or more states.

A site visit by the TRC members and appointed individuals may be required, which shall be arranged by the EIA Consultant.

#### 4.2.2.1 Terms of References (TOR) Review Procedure

The output of scoping exercise is the terms of reference (TOR). For projects that fall under the Second Schedule, the Project Proponent shall first submit to the DOE the TOR, in accordance with the format outlined in the specific EIA guidelines (if available) for endorsement. **Appendix 8** gives a general

guidance on scoping and also the general contents of TOR which shall be followed in the TOR formulation.

The review of the TOR is carried out by the EIA Technical Review Committee (EIATRC) comprised of TRC members (a team of DOE officers at the Headquarters), individuals specifically appointed (AIs) on an ad hoc basis from within or outside of the DOE and representatives from government agencies (GAs). Non-Governmental Organizations (NGOs) may also be invited to the EIATRC meetings as general representatives or as Appointed Individuals (AIs). The AIs are individuals who have vast technical experiences in the relevant areas related to the proposed project, which may include potential project environmental impacts, impact study methodologies, and applicable pollution prevention and mitigation measures. The same personnel (i.e. TRC members and AIs) will also serve as the committee for reviewing the EIA Reports. The adequacy of the scoping coverage and the TOR formulated will be decided in a Terms of Reference Adequacy Check (TORAC) meeting which will be chaired by the Director General of the DOE. The TORAC meeting members comprise the TRC members, AIs and GAs, and may include NGOs. At this meeting, the TOR may be accepted or agreed upon or it may require a revision.

Figure 4.2 shows the procedural steps for submission of TOR.

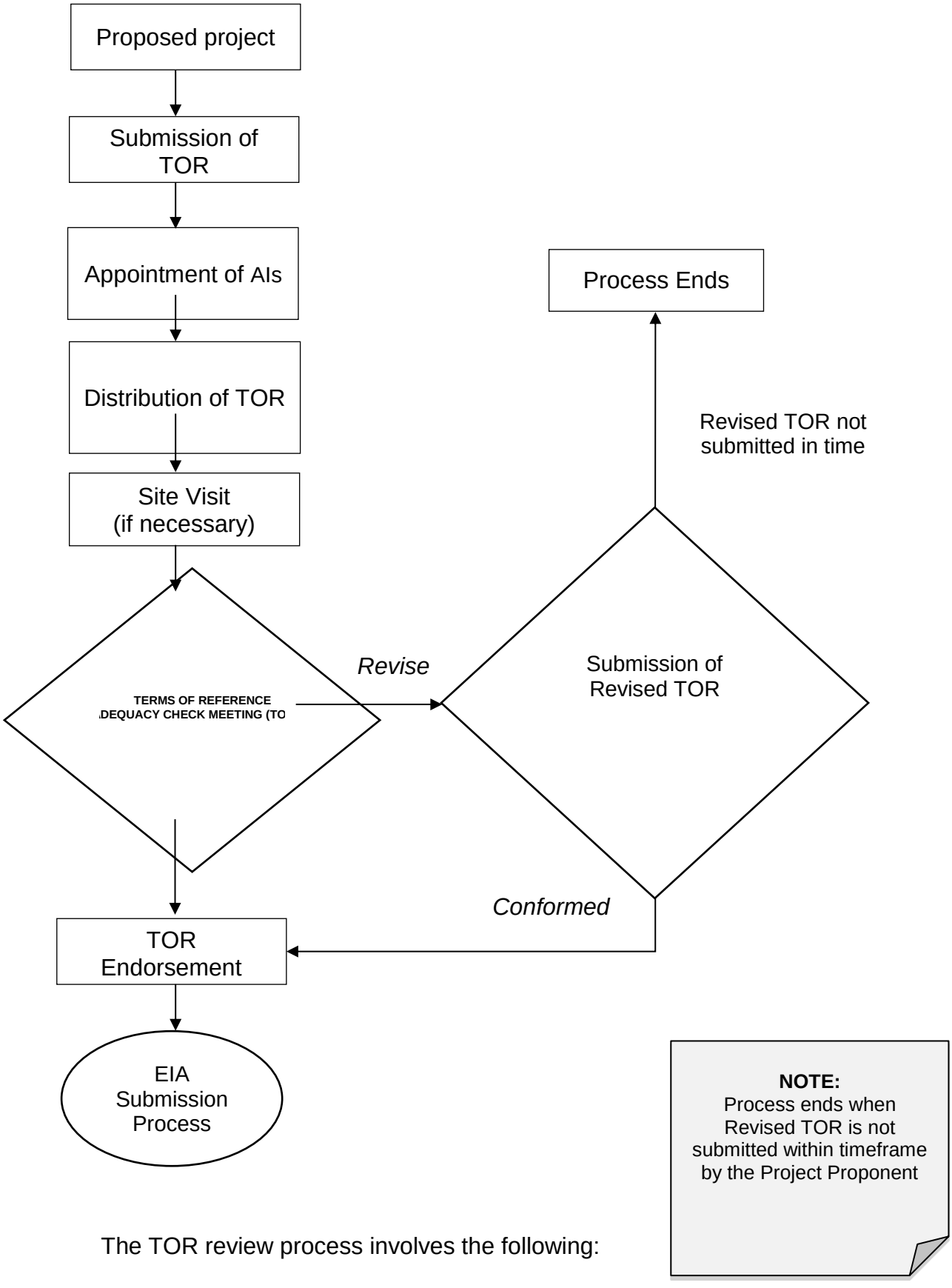



**Figure 4.2: Procedural steps for assessment of EIA Report for Second Schedule Activities – TOR Adequacy Check Stage**

The TOR review process involves the following:

(30 working days) and an additional of two weeks (10 working days) for submission of revised TOR.

(i) A minimum of 3 hard copies and 1 softcopy (in PDF format) of

the draft TOR shall be submitted to the DOE HQ. Additional copies are to be submitted whenever necessary. Through the Project Proponent, the TRC (DOE Headquarters) will distribute the Report to the relevant government agencies (GAs) and appointed individuals (AIs) for the purpose of the TORAC meeting.

(ii) A visit to the project site by the DOE and appointed individuals (AIs) may be required, which shall be arranged by the Consultant through the TRC.

(iii) The TORAC meeting will be conducted after the site visit, normally within the third week from date of submission of the TOR to DOE. At this meeting, the proposed TOR will be presented by the Project Proponent and his Consultant to the TORAC meeting when deemed necessary.

(iv) The outcome of the TOR review meeting may lead to:

(a) Acceptance of the TOR, provided:

- The TOR is in line with the specific EIA guidelines (if available) and/or the contents of the TOR specified in **Appendix 8**.
- Recommendations from the TORAC meeting members have been accepted or agreed upon.

(b) Revision of TOR, where:

- The TOR is not in line with the specific EIA guidelines (if available) and/or the contents of the TOR specified in **Appendix 8**.
- There is need to provide additional information to clarify any unresolved or outstanding matters arising during the review process. The additional scope shall be submitted at least two weeks before the processing time ends. If the additional scope or revised TOR is not submitted within the time frame, the process will end and new submission is required if the relevant

party is still interested.

### 4.3 Site Suitability Assessment

The EIA Consultant shall perform site suitability assessment (SSA) by comparing the proposed project (its location and type of development) with the approved development plans such the National Physical Plan (NPP), structure plans, and Guidelines for the Siting and Zoning of Industry and Residential Areas (SZIRA) or any other guidelines prescribed by the Director General of Environment which are relevant to the proposed project. Comments on SSA shall be reported in the EIA Report. There may be a situation where the proposed project site or location may not contradict the approved development plans or any other guidelines prescribed by the DOE, but the site exhibits certain critical characteristics (for example, geomorphological features) that may present a particularly formidable constraint to the proposed project, due to the nature of the project. In such a situation, the Consultant shall thoroughly examine the suitability of the site and report it in the EIA Report.

### 4.4 Baseline Conditions

A description of the existing environment where the proposed project is to be located (termed as “baseline conditions”) shall be presented. The important components of the affected environment shall be identified and described. The methods used and investigation undertaken for this purpose shall be discussed and clearly indicated and shall be appropriate to the size and complexity of the assessment tasks. Uncertainties encountered in the studies shall also be indicated. Land use plans for the proposed project site shall be consulted and other data collected as necessary to assist in the determination of the baseline conditions.

### 4.5 Impact Assessment Methodology

Appropriate methodologies to assess the environmental impacts shall be identified for a particular EIA study and the rationale for the choice of methodologies shall be discussed.

For example, for air pollution impact studies, several mathematical models which have been developed by US Environmental Protection Agency (USEPA) are

available, while some companies have developed their own models. Specific dispersion models such as the industrial source complex (ISC3) dispersion models developed by US Environmental Protection Agency may be used for calculation of the ground-level concentrations for point, area, flare and volume sources. The results of modeling exercise shall be presented in an appropriate form such as pollutant concentration with contour visualization on a map using ArcGIS as GIS platform. The meteorological data (wind speed, wind direction, stability class, ambient temperature, cloud base height, cloud cover, mixing height) used for model input shall be adequate and acceptable to be used for determining the highest short term and long term air quality impacts at air sensitive receptors. The modeling exercise shall capture the worst case scenarios to determine the worst case short term impacts.

Similarly, impact assessment studies may involve assessing water quality impacts, sediment transport, groundwater pollution, oil slick, and liquefied natural gas spill. All modelling studies shall undergo the stages of verification, calibration, and validation. The outputs of the modeling studies shall be presented in an easy to understand manner. The uncertainties in the models shall be discussed thoroughly.

### 4.6 Specifications and Format of EIA Report

It is the responsibility of the Project Proponent and the EIA consulting team (especially the EIA team leader) to ensure quality control of the EIA Report is performed before the EIA Report is submitted to the DOE. Internal quality check will ensure that all relevant and pertinent tasks have been performed satisfactorily and no important tasks left incomplete; the latter situation may lead to rejection of the Report or delay in decision making on the Report. The EIA Report which is ready for submission shall have taken into account the following general quality control elements:

(a) To ensure the scoping of study has been sufficiently deliberated
(b) To ensure statutory and administrative requirements are met
(c) To ensure the EIA Report is organized and presented clearly and in a coherent manner
(d) To ascertain the EIA Report is impartial
(e) To assure the Report is able to answer key questions regarding the proposed project that are critical for decision making

(f) To ensure the information about impacts has been organized in a concise, logical, coherent manner and is communicated in an intelligent fashion

(g) To ensure the proposed project and its options are described in a comprehensive manner using satellite imagery, diagrams, plans or maps

(h) To ensure the EIA Report is scientifically and technically sound from the perspective of:

  (i) The reliability of data and coefficients (constants) used for modelling (predictive technique) where they must be accurate and based on local conditions where the proposed project is to be sited

  (ii) The quantitative impact prediction, where the magnitude and significance of impacts must be predicted both with the mitigating measures in place and for the worst case scenario

(i) To ensure that the Report identifies the follow-up works of post EIA stage that are required, such as Environmental Management Plan (EMP), Environmental Monitoring Report (EMR) and Environmental Audit Report (EAR).

An example of arrangement of the front cover and various chapters of the EIA report shall follow the example given in **Appendix 9**.

Appendix 6

28 Ogos 2015
*28 August 2015*
P.U. (A) 195

# WARTA KERAJAAN PERSEKUTUAN

# *FEDERAL GOVERNMENT GAZETTE*

## PERINTAH KUALITI ALAM SEKELILING (AKTIVITI YANG DITETAPKAN) (PENILAIAN KESAN KEPADA ALAM SEKELILING) 2015

## *ENVIRONMENTAL QUALITY (PRESCRIBED ACTIVITIES) (ENVIRONMENTAL IMPACT ASSESSMENT) ORDER 2015*

DISIARKAN OLEH/
*PUBLISHED BY*
JABATAN PEGUAM NEGARA/
*ATTORNEY GENERAL'S CHAMBERS*

AKTA KUALITI ALAM SEKELILING 1974

PERINTAH KUALITI ALAM SEKELILING (AKTIVITI YANG DITETAPKAN) (PENILAIAN KESAN KEPADA ALAM SEKELILING) 2015

PADA menjalankan kuasa yang diberikan oleh subseksyen 34A(1) Akta Kualiti Alam Sekeliling 1974 [*Akta 127*], Menteri, selepas berunding dengan Majlis, membuat perintah yang berikut:

**Nama**

1. Perintah ini bolehlah dinamakan **Perintah Kualiti Alam Sekeliling (Aktiviti yang Ditetapkan) (Penilaian Kesan kepada Alam Sekeliling) 2015**.

**Tafsiran**

2. Dalam Perintah ini—

"kawasan sensitif alam sekitar" ertinya—

*(a)* mana-mana kawasan yang ditetapkan sedemikian dalam rancangan pemajuan atau rancangan fizikal negara di bawah Akta Perancangan Bandar dan Desa 1976 [*Akta 172*]; atau

*(b)* mana-mana kawasan yang ditetapkan sebagai kawasan perlindungan alam sekitar atau kawasan pemuliharaan alam sekitar di bawah mana-mana Enakmen di Negeri Sabah atau mana-mana Ordinan di Negeri Sarawak;

"laporan" ertinya laporan penilaian kesan kepada alam sekeliling.

**Aktiviti yang ditetapkan**

3. (1) Aktiviti yang dinyatakan dalam Jadual Pertama dan Jadual Kedua ialah aktiviti yang ditetapkan.

(2) Aktiviti yang dinyatakan dalam Jadual Pertama tidak memerlukan pameran awam dan ulasan awam melainkan jika diarahkan selainnya, secara bertulis, oleh Ketua Pengarah.

(3) Aktiviti yang dinyatakan dalam Jadual Kedua memerlukan pameran awam dan ulasan awam.

(4) Walau apa pun subperenggan (1), aktiviti yang berikut juga ialah aktiviti yang ditetapkan:

*(a)* apa-apa aktiviti yang ditetapkan yang dibahagikan kepada saiz atau kuantum yang lebih kecil daripada saiz atau kuantum yang dinyatakan dalam Jadual Pertama dan Jadual Kedua; atau

*(b)* apa-apa aktiviti yang melibatkan pertambahan saiz atau kuantum yang menyebabkan aktiviti itu dikategorikan sebagai aktiviti yang ditetapkan.

(5) Pameran awam dan ulasan awam yang disebut dalam subperenggan (2) dan (3) ialah suatu pameran laporan, di tempat dan dalam tempoh yang ditentukan oleh Ketua Pengarah, bagi mendapatkan ulasan awam berhubung dengan laporan itu.

**Pemakaian bagi Negeri Sarawak dan Sabah**

4. (1) Perintah ini terpakai bagi Negeri Sarawak berkenaan dengan aktiviti yang ditetapkan yang dinyatakan dalam butiran yang berikut:

*(a)* butiran 2, 6, 9 dan 10 dan subbutiran 11*(a)* dan *(b)* dan 14*(a)* Jadual Pertama; dan

*(b)* butiran 2, 6, 9, 10, 11, 16 dan 17 dan subbutiran 14*(a)* Jadual Kedua.

(2) Perintah ini terpakai bagi Negeri Sabah berkenaan dengan aktiviti yang ditetapkan yang dinyatakan dalam butiran yang berikut:

*(a)* butiran 2, 6, 9, dan 14 dan subbutiran 11*(a)* dan *(b)* Jadual Pertama; dan

*(b)* butiran 2, 6, 9, 11, 14 dan 17 Jadual Kedua.

**Pembatalan, kecualian dan peralihan**

5. (1) Perintah Kualiti Alam Sekeliling (Aktiviti yang Ditetapkan) (Penilaian Kesan kepada Alam Sekeliling) 1987 [*P.U. (A) 362/1987*], yang kemudian ini disebut "Perintah yang dibatalkan" dalam perenggan ini, dibatalkan.

(2) Perintah ini tidak menjejaskan mana-mana aktiviti yang ditetapkan di bawah Perintah yang dibatalkan jika laporan telah diluluskan oleh Ketua Pengarah sebelum berkuat kuasanya Perintah ini.

(3) Laporan berkenaan dengan mana-mana aktiviti yang ditetapkan di bawah Perintah yang dibatalkan yang telah diterima oleh Ketua Pengarah sebelum mula berkuat kuasanya Perintah ini hendaklah diuruskan seolah-olah Perintah ini tidak dibuat.

(4) Jika Ketua Pengarah tidak meluluskan laporan di bawah subperenggan (3) dan orang yang mengemukakan laporan itu mengemukakan semula laporan itu untuk kelulusan selepas berkuat kuasanya Perintah ini, laporan itu hendaklah diuruskan mengikut Perintah ini.

JADUAL PERTAMA

[Subperenggan 3(1) dan (4)]

1. PERTANIAN:

*(a)* Skim kemajuan tanah yang meliputi kawasan seluas 20 hektar atau lebih tetapi kurang daripada 500 hektar untuk menjadikan hutan kepada pengeluaran pertanian.

*(b)* Pembangunan estet pertanian yang meliputi kawasan seluas 500 hektar atau lebih yang melibatkan perubahan dalam jenis kegunaan pertanian.

2. AERODROM:

Peluasan aerodrom yang melibatkan landasan terbang sepanjang 1,000 meter atau lebih.

3. SALIRAN DAN PENGAIRAN:

*(a)* Pembinaan tasik buatan manusia dan pembesaran tasik bukan semula jadi dengan kawasan permukaan seluas 100 hektar atau lebih.

*(b)* Skim pengairan yang meliputi kawasan seluas 500 hektar atau lebih.

4. PERIKANAN:

Projek akuakultur berasaskan penggunaan tanah beserta dengan pembersihan hutan paya bakau, hutan paya gambut atau hutan paya air tawar yang meliputi kawasan seluas 20 hektar atau lebih tetapi kurang daripada 50 hektar.

5. PERHUTANAN:

*(a)* Pengubahan hutan pada ketinggian 300 meter atau lebih di atas purata aras laut kepada kegunaan lain tanah yang meliputi kawasan seluas 20 hektar atau lebih tetapi kurang daripada 100 hektar.

*(b)* Pembalakan, atau penebangan atau pengambilan kayu bagi maksud pengubahan hutan kepada kegunaan tanah yang lain yang meliputi kawasan seluas 100 hektar atau lebih tetapi kurang daripada 500 hektar.

*(c)* Pembalakan, atau penebangan atau pengambilan kayu daripada hutan pada ketinggian kurang daripada 300 meter di atas purata aras laut yang meliputi kawasan seluas 100 hektar atau lebih, di luar hutan simpan kekal.

*(d)* Pengubahan kawasan—

(i) hutan paya bakau;

(ii) hutan paya gambut; atau

(iii) hutan paya air tawar,

bagi kegunaan perindustrian, perumahan atau pertanian yang meliputi kawasan seluas 20 hektar atau lebih tetapi kurang daripada 50 hektar.

*(e)* Pembangunan ladang hutan yang meliputi kawasan seluas 100 hektar atau lebih tetapi kurang daripada 500 hektar.

6. INDUSTRI:

*(a)* Kimia:

Keupayaan pengeluaran setiap keluaran atau gabungan keluaran sebanyak 100 tan atau lebih sehari.

*(b)* Simen:

Loji pengisaran simen dengan keupayaan pengeluaran simen sebanyak 200 tan atau lebih sehari.

*(c)* Kapur:

Pengeluaran kapur 100 tan atau lebih sehari menggunakan relau putar atau 50 tan atau lebih sehari dengan menggunakan relau tegak.

*(d)* Petrokimia:

Keupayaan pengeluaran setiap keluaran atau gabungan keluaran kurang daripada 50 tan sehari.

*(e)* Limbungan kapal:

Tanan berat muatan 5,000 tan atau lebih.

7. PENEBUSGUNAAN TANAH:

Penebusgunaan kawasan pantai atau penebusgunaan tanah sepanjang tebing sungai yang melibatkan kawasan kurang daripada 50 hektar.

8. PERLOMBONGAN:

*(a)* Pemprosesan bijih di luar kawasan tenemen mineral, termasuk pemekatan aluminium, kuprum, emas, besi, tantalum atau elemen nadir bumi.

*(b)* Perlombongan pasir di darat atau sungai atau di kawasan pantai atau di laut wilayah yang tidak melebihi 3 batu nautika yang diukur dari garis air surut, meliputi kawasan seluas 20 hektar atau lebih.

*(c)* Perlombongan pasir di kawasan pelantar benua.

9. PETROLEUM:

*(a)* Pembangunan—

(i) medan minyak;

(ii) medan gas; atau

(iii) medan minyak dan gas.

*(b)* Pembinaan sepanjang 30 kilometer atau lebih—

(i) talian paip luar pantai;

(ii) talian paip daratan; atau

(iii) talian paip luar pantai dan talian paip daratan.

*(c)* Pembinaan—

(i) kemudahan pengasingan, pemprosesan, pengendalian dan penstoran minyak;

(ii) kemudahan pengasingan, pemprosesan, pengendalian dan penstoran gas; atau

(iii) kemudahan pengasingan, pemprosesan, pengendalian dan penstoran minyak dan gas.

*(d)* Pembinaan depoh keluaran bagi penstoran petrol, gas atau diesel yang mempunyai keupayaan penstoran tergabung sebanyak 60,000 tong atau lebih

(tidak termasuk stesen servis) dalam jarak 3 kilometer dari kawasan perdagangan, perindustrian atau kediaman.

10. PELABUHAN:

*(a)* Peluasan pelabuhan yang melibatkan penambahan sebanyak 50 peratus atau lebih dalam keupayaan pengendalian setahun.

*(b)* Peluasan pelabuhan perikanan yang melibatkan penambahan sebanyak 50 peratus atau lebih dalam keupayaan pendaratan ikan setahun.

11. PENJANAAN DAN PEMANCARAN KUASA:

*(a)* Pembinaan stesen janakuasa stim yang menggunakan bahan api fosil (selain arang batu) dan mempunyai keupayaan 10 megawatt atau lebih, dengan atau tanpa talian pemancar.

*(b)* Pembinaan stesen janakuasa kitar padu, dengan atau tanpa talian pemancar.

*(c)* Pembinaan talian pemancar di kawasan sensitif alam sekitar.

12. PEMBANGUNAN DI KAWASAN PANTAI DAN BUKIT:

*(a)* Pembinaan bangunan atau kemudahan yang mempunyai 80 bilik atau lebih di kawasan pantai.

*(b)* Pembinaan resort atau hotel peranginan bukit pada ketinggian 300 meter atau lebih di atas purata aras laut yang meliputi kawasan seluas 20 hektar atau lebih.

13. PEMBANGUNAN DI KAWASAN CERUN:

Pembangunan atau pembersihan tanah yang meliputi kawasan yang kurang daripada 50 peratus kawasan cerun yang berkecerunan melebihi atau sama dengan $25^0$ tetapi kurang daripada $35^0$.

14. PENGOLAHAN DAN PELUPUSAN BUANGAN:

*(a)* Buangan terjadual:

(i) Pembinaan loji pulih guna (luar tapak).

(ii) Pembinaan loji pengolahan air buangan (luar tapak).

(iii) Pembinaan kemudahan penstoran (luar tapak).

*(b)* Sisa pepejal:

(i) Pembinaan loji pengkomposan.

(ii) Pembinaan loji pulih guna atau loji kitar semula.

*(c)* Kumbahan:

(i) Pembinaan loji pengolahan kumbahan dengan 20,000 kesetaraan populasi atau lebih.

(ii) Kemudahan rawatan enap cemar.

15. PENGOREKAN:

*(a)* Pengorekan induk.

*(b)* Pelupusan bahan buangan yang dikorek.

16. PERUMAHAN:

Pembangunan perumahan yang meliputi kawasan seluas 50 hektar atau lebih.

17. PEMBANGUNAN ESTET INDUSTRI:

Pembangunan estet perindustrian yang meliputi kawasan seluas 20 hektar atau lebih.

18. BANDAR BAHARU:

Pembinaan bandar baharu yang terdiri daripada 2,000 unit kediaman atau lebih yang meliputi kawasan seluas 100 hektar atau lebih.

19. KUARI:

Pengkuarian bahan batuan.

20. JALAN:

*(a)* Pembinaan lebuh raya ekspres.

*(b)* Pembinaan lebuh raya.

*(c)* Pembinaan jalan, terowong atau jambatan yang melintasi atau bersebelahan atau berdekatan dengan kawasan sensitif alam sekitar.

21. BEKALAN AIR:

Pemajuan air bawah tanah bagi bekalan air perindustrian, pertanian atau kawasan bandar sebanyak 4,500 meter padu atau lebih sehari.

JADUAL KEDUA
[Subperenggan 3(1) dan (4)]

1. PERTANIAN:

*(a)* Skim kemajuan tanah yang meliputi kawasan seluas 500 hektar atau lebih untuk menjadikan hutan kepada pengeluaran pertanian.

*(b)* Kawasan baru penternakan babi yang mempunyai sebanyak 2,000 populasi babi dirian atau lebih.

2. AERODROM:

*(a)* Pembinaan aerodrom baharu yang melibatkan landasan terbang sepanjang 1,000 meter atau lebih.

*(b)* Pembinaan aerodrom di dalam atau bersebelahan atau berdekatan dengan mana-mana taman negeri, taman negara, taman laut negara, pulau sekeliling taman laut atau kawasan sensitif alam sekitar.

3. SALIRAN DAN PENGAIRAN:

*(a)* Pembinaan tasik buatan manusia dan pembesaran tasik bukan semula jadi dengan kawasan permukaan seluas 50 hektar atau lebih di dalam atau bersebelahan atau berdekatan dengan kawasan sensitif alam sekitar.

*(b)* Mana-mana saliran kawasan tanah bencah, habitat hidupan liar atau hutan darat yang meliputi kawasan seluas 20 hektar atau lebih.

4. PERIKANAN:

Projek akuakultur berasaskan penggunaan tanah beserta dengan pembersihan hutan paya bakau, hutan paya gambut atau hutan paya air tawar yang meliputi kawasan seluas 50 hektar atau lebih.

5. PERHUTANAN:

*(a)* Pengubahan hutan pada ketinggian 300 meter atau lebih di atas purata aras laut kepada kegunaan lain tanah yang meliputi kawasan seluas 100 hektar atau lebih.

*(b)* Pembalakan atau pengubahan hutan kepada kegunaan tanah yang lain di dalam—

(i) kawasan tadahan di kolam takungan air yang digunakan bagi bekalan air perbandaran, pengairan atau penjanaan kuasa hidro;

(ii) kawasan yang bersebelahan atau berdekatan dengan mana-mana taman negeri, taman negara atau taman laut negara;

(iii) mana-mana taman negeri, taman negara atau taman laut negara; atau

(iv) kawasan yang diwartakan sebagai hutan tadahan air di bawah Akta Perhutanan Negara 1984 [*Akta 313*].

*(c)* Pembalakan, atau penebangan atau pengambilan kayu dari hutan pada ketinggian 300 meter atau lebih di atas purata aras laut yang meliputi kawasan seluas 100 hektar atau lebih, di luar kawasan hutan simpan kekal.

*(d)* Pembalakan, atau penebangan atau pengambilan kayu yang meliputi kawasan 500 hektar atau lebih.

*(e)* Pembangunan ladang hutan yang meliputi kawasan seluas 500 hektar atau lebih.

*(f)* Pengubahan kawasan—

(i) hutan paya bakau;

(ii) hutan paya gambut; atau

(iii) hutan paya air tawar,

bagi kegunaan perindustrian, perumahan atau pertanian yang meliputi kawasan seluas 50 hektar atau lebih.

*(g)* Pembersihan kawasan hutan paya bakau, hutan paya gambut atau hutan paya air tawar di pulau yang bersebelahan dengan mana-mana taman laut negara.

6. INDUSTRI:

*(a)* Bukan besi:

(i) Peleburan utama aluminium (semua saiz).

(ii) Peleburan utama kuprum (semua saiz).

(iii) Peleburan utama bukan besi yang lain (mengeluarkan 50 tan keluaran atau lebih sehari).

*(b)* Simen:

Dengan keupayaan pengeluaran klinker sebanyak 30 tan atau lebih sejam.

*(c)* Besi dan keluli:

(i) Menggunakan bijih besi sebagai bahan mentah bagi pengeluaran 100 tan atau lebih sehari.

(ii) Menggunakan besi sekerap sebagai bahan mentah bagi pengeluaran 200 tan atau lebih sehari.

*(d)* Petrokimia:

Keupayaan pengeluaran setiap keluaran atau gabungan keluaran sebanyak 50 tan atau lebih sehari.

*(e)* Pulpa, atau pulpa dan kertas:

Keupayaan pengeluaran 50 tan atau lebih sehari.

*(f)* Industri kitar semula kertas:

Keupayaan pengeluaran 50 tan atau lebih sehari.

7. PENEBUSGUNAAN TANAH:

*(a)* Penebusgunaan kawasan pantai atau penebusgunaan tanah sepanjang tebing sungai yang melibatkan kawasan seluas 50 hektar atau lebih.

*(b)* Penebusgunaan kawasan pantai atau penebusgunaan tanah sepanjang tebing sungai di dalam atau bersebelahan atau berdekatan dengan kawasan sensitif alam sekitar.

*(c)* Penebusgunaan bagi pulau buatan manusia.

8. PERLOMBONGAN:

*(a)* Perlombongan bahan galian dalam kawasan baharu yang melibatkan operasi berskala besar.

*(b)* Perlombongan bahan galian di dalam atau bersebelahan atau berdekatan dengan kawasan sensitif alam sekitar.

9. PETROLEUM:

*(a)* Pembinaan loji penapisan minyak.

*(b)* Pembinaan loji penapisan gas.

*(c)* Pembinaan loji penapisan minyak dan gas.

10. PELABUHAN:

*(a)* Pembinaan pelabuhan baharu.

*(b)* Pembinaan pelabuhan perikanan baharu.

11. PENJANAAN DAN PEMANCARAN KUASA:

*(a)* Pembinaan stesen janakuasa yang menggunakan bahan api arang batu yang mempunyai keupayaan 10 megawatt atau lebih dengan atau tanpa talian pemancar.

*(b)* Pembinaan stesen janakuasa yang menggunakan bahan api nuklear dengan atau tanpa talian pemancar.

12. PEMBANGUNAN DI KAWASAN PANTAI, TAMAN NEGARA DAN TAMAN NEGERI:

Pembangunan kemudahan pelancongan, kemudahan rekreasi atau kemudahan lain—

*(a)* di dalam mana-mana taman negara atau taman negeri; atau

*(b)* di mana-mana pulau dalam perairan sekeliling yang telah diwartakan sebagai taman laut atau rizab laut di bawah Akta Perikanan 1985 [*Akta 317*].

13. PEMBANGUNAN DI KAWASAN CERUN:

*(a)* Pembangunan atau pembersihan tanah yang meliputi 50 peratus atau lebih kawasan cerun yang berkecerunan lebih daripada atau sama dengan $25^0$ tetapi kurang daripada $35^0$.

*(b)* Pembinaan jalan, terowong atau jambatan yang melintasi kawasan cerun yang berkecerunan melebihi atau sama dengan $35^0$.

14. PENGOLAHAN DAN PELUPUSAN BUANGAN:

*(a)* Buangan terjadual:

(i) Pembinaan loji rawatan terma.

(ii) Pembinaan loji pulih guna luar tapak bagi buangan bateri asid plumbum.

(iii) Pembinaan loji pulih guna luar tapak atau kemudahan rawatan yang mengeluarkan jumlah air buangan yang ketara yang terletak di hulu pengambilan bekalan air awam.

(iv) Pembinaan kemudahan tapak penimbusan tanah selamat.

*(b)* Sisa pepejal:

(i) Pembinaan loji rawatan terma.

(ii) Pembinaan kemudahan tapak penimbusan sanitari.

(iii) Pembinaan stesen pemindahan.

15. PEMBINAAN EMPANGAN:

*(a)* Pembinaan empangan atau kolam takungan air bagi maksud pengairan, tebatan banjir, kawalan pengelodakan, rekreasi, bekalan air atau apa-apa sebab lain dengan kawasan permukaan seluas 100 hektar atau lebih.

*(b)* Empangan dan skim kuasa hidroelektrik dengan salah satu atau kedua-dua yang berikut:

(i) empangan yang ketinggiannya 15 meter atau lebih dan struktur sampingan yang meliputi kawasan seluas 40 hektar atau lebih;

(ii) kolam takungan air dengan kawasan permukaan seluas 100 hektar atau lebih.

16. PENGANGKUTAN:

*(a)* Pembinaan laluan atau landasan cabang baharu bagi projek pengangkutan laju massa.

*(b)* Pembinaan landasan laluan atau landasan cabang baharu kereta api.

17. BAHAN RADIOAKTIF DAN BUANGAN RADIOAKTIF:

Mana-mana aktiviti yang dinyatakan dalam Jadual ini dan Jadual Pertama yang menggunakan bahan radioaktif dan menghasilkan buangan radioaktif.

Dibuat 5 Ogos 2015
[as(s)91/110/919/014 S.K 02 Jld 2; PN(PU2)280/XVI]

DATO' SRI DR. HAJI WAN JUNAIDI BIN TUANKU JAAFAR
*Menteri Sumber Asli dan Alam Sekitar*

ENVIRONMENTAL QUALITY ACT 1974

ENVIRONMENTAL QUALITY (PRESCRIBED ACTIVITIES)
(ENVIRONMENTAL IMPACT ASSESSMENT) ORDER 2015

IN exercise of the powers conferred by subsection 34A(1) of the Environmental Quality Act 1974 [*Act 127*], the Minister, after consultation with the Council, makes the following order:

**Citation**

1. This order may be cited as the **Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 2015**.

**Interpretation**

2. In this Order—

"environmentally sensitive area" means—

*(a)* any area specified as such in the development plan or national physical plan under the Town and Country Planning Act 1976 [*Act 172*]; or

*(b)* any area specified as enviromental protection area or enviromental conservation area under any Enactment in the State of Sabah or any Ordinance in the State of Sarawak;

"report" means a report of an environmental impact assessment.

**Prescribed activities**

3. (1) The activities specified in the First Schedule and the Second Schedule are prescribed activities.

(2) The activities specified in the First Schedule do not require public display and public comment unless otherwise instructed, in writing, by the Director General.

(3) The activities specified in the Second Schedule require public display and public comment.

(4) Notwithstanding subparagraph (1), the following activities are also prescribed activities:

*(a)* any prescribed activity which has been divided into a size or quantum smaller than the size or quantum specified in the First Schedule and the Second Schedule; or

*(b)* any activity involving the increase in size or quantum resulting such activity to be categorized as prescribed activities.

(5) Public display and public comment referred to in subparagraphs (2) and (3) are a display of a report, at a place and within the time determined by the Director General, to obtain public comment in relation to that report.

**Application to the State of Sarawak and Sabah**

4. (1) This Order shall apply to the State of Sarawak in respect of the prescribed activities specified in the following items:

*(a)* items 2, 6, 9 and 10 and subitems 11*(a)* and *(b)* and 14*(a)* of the First Schedule; and

*(b)* items 2, 6, 9, 10, 11, 16 and 17 and subitem 14*(a)* of the Second Schedule.

(2) This Order shall apply to the State of Sabah in respect of the prescribed activities specified in the following items:

*(a)* items 2, 6, 9 and 14 and subitems 11*(a)* and *(b)* of the First Schedule; and

*(b)* items 2, 6, 9, 11, 14 and 17 of the Second Schedule.

**Revocation, saving and transitional**

5. (1) The Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987 [*P.U. (A) 362/1987*], hereinafter referred to as "the revoked Order" in this paragraph, is revoked.

(2) This Order shall not affect any prescribed activity under the revoked Order where a report has been approved by the Director General before the coming into operation of this Order.

(3) A report in respect of any prescribed activity under the revoked Order which has been received by the Director General before the coming into operation of this Order shall be dealt with as if this Order has not been made.

(4) If the Director General does not approve the report under subparagraph (3) and the person who submitted the report re-submits it for approval after the coming into operation of this Order, the report shall be dealt with in accordance with this Order.

FIRST SCHEDULE

[Subparagraphs 3(1) and (4)]

1. AGRICULTURE:

*(a)* Land development schemes covering an area of 20 hectares or more but less than 500 hectares to bring forest into agricultural production.

*(b)* Development of agricultural estates covering an area of 500 hectares or more involving changes in types of agricultural use.

2. AERODROME:

Expansion of an aerodrome involving a runway of 1,000 metres or longer.

3. DRAINAGE AND IRRIGATION:

*(a)* Construction of man-made lakes and enlargement of artificial lakes with surface areas of 100 hectares or more.

*(b)* Irrigation schemes covering an area of 500 hectares or more.

4. FISHERIES:

Land based aquaculture projects accompanied by clearing of mangrove forest, peat swamp forest or fresh water swamp forest covering an area of 20 hectares or more but less than 50 hectares.

5. FORESTRY:

*(a)* Conversion of forest at 300 meters or more above mean sea level to other land use covering an area of 20 hectares or more but less than 100 hectares.

*(b)* Logging, or cutting or taking of timber for the purpose of conversion from forest to other land use covering an area of 100 hectares or more but less than 500 hectares.

*(c)* Logging, or cutting or taking of timber from forest at less than 300 meters above mean sea level covering an area of 100 hectares or more, outside permanent reserved forest.

*(d)* Conversion of an area of—

(i) mangrove forest;

(ii) peat swamp forest; or

(iii) fresh water swamp forest,

for industrial, housing or agricultural use covering an area of 20 hectares or more but less than 50 hectares.

*(e)* Development of planted forest covering an area of 100 hectares or more but less than 500 hectares.

6. INDUSTRY:

*(a)* Chemical:

Production capacity of each product or combined products of 100 tonnes or more per day.

*(b)* Cement:

Cement grinding plant with cement production capacity of 200 tonnes or more per day.

*(c)* Lime:

Production of 100 tonnes or more per day of burnt lime using rotary kiln or 50 tonnes or more per day of burnt lime using vertical kiln.

*(d)* Petrochemicals:

Production capacity of each product or combined product of less than 50 tonnes per day.

*(e)* Shipyards:

Dead weight tonnage of 5,000 tonnes or more.

7. LAND RECLAMATION:

Coastal reclamation or land reclamation along river banks involving an area of less than 50 hectares.

8. MINING:

*(a)* Ore processing outside mineral tenement area, including concentrating of aluminium, copper, gold, iron, tantalum or rare earth element.

*(b)* Sand mining on land or river or in coastal area or in territorial waters not exceeding 3 nautical miles measured from the low-water line, involving an area of 20 hectares or more.

*(c)* Sand mining in continental shelf area.

9. PETROLEUM:

*(a)* Development of—

(i) oil field;

(ii) gas field; or

(iii) oil and gas field.

*(b)* Construction of 30 kilometres or more in length of—

(i) off-shore pipelines;

(ii) on-shore pipelines; or

(iii) off-shore pipelines and on-shore pipelines.

*(c)* Construction of—

(i) oil separation, processing, handling and storage facilities;

(ii) gas separation, processing, handling and storage facilities; or

(iii) oil and gas separation, processing, handling and storage facilities.

*(d)* Construction of product depot for the storage of petrol, gas or diesel which has the combined storage capacity of 60,000 barrels or more (excluding service station) within 3 kilometres from any commercial, industrial or residential area.

10. PORTS:

*(a)* Expansion of port involving an increase of 50 percent or more in handling capacity per annum.

*(b)* Expansion of fishing port involving an increase of 50 percent or more in fish landing capacity per annum.

11. POWER GENERATION AND TRANSMISSION:

*(a)* Construction of steam generated power station using fossil fuels (other than coal) and having the capacity of 10 megawatts or more, with or without transmission line.

*(b)* Construction of combined cycle power station, with or without transmission line.

*(c)* Construction of transmission line in environmentally sensitive area.

12. DEVELOPMENT IN COASTAL AND HILL AREA:

*(a)* Construction of building or facilities with 80 rooms or more in coastal area.

*(b)* Construction of hill-station resort or hotel at 300 meters or more above mean sea level covering an area of 20 hectares or more.

13. DEVELOPMENT IN SLOPE AREA:

Development or land clearing less than 50 per cent of an area with slope greater than or equal to $25^0$ but less than $35^0$.

14. WASTE TREATMENT AND DISPOSAL:

*(a)* Scheduled waste:

(i) Construction of recovery plant (off-site).

(ii) Construction of wastewater treatment plant (off-site).

(iii) Construction of storage facility (off-site).

*(b)* Solid waste:

(i) Construction of composting plant.

(ii) Construction of recovery plant or recycling plant.

*(c)* Sewage:

(i) Construction of sewage treatment plant with 20,000 population equivalent or more.

(ii) Sludge treatment facilities.

15. DREDGING:

*(a)* Capital dredging.

*(b)* Disposal of waste dredged materials.

16. HOUSING:

Housing development covering an area of 50 hectares or more.

17. INDUSTRIAL ESTATE DEVELOPMENT:

Development of industrial estate covering an area of 20 hectares or more.

18. NEW TOWNSHIP:

Construction of new township consisting of 2,000 housing accommodation units or more or covering an area of 100 hectares or more.

19. QUARRY:

Quarrying of rock material.

20. ROAD:

*(a)* Construction of expressways.

*(b)* Construction of highways.

*(c)* Construction of road, tunnel or bridge traversing or adjacent or near to environmentally sensitive areas.

21. WATER SUPPLY:

Groundwater development for industrial, agricultural or urban water supply of 4,500 cubic metres or more per day.

SECOND SCHEDULE
[Subparagraphs 3(1) and (4)]

1. AGRICULTURE:

*(a)* Land development schemes covering an area of 500 hectares or more to bring forest into agricultural production.

*(b)* New pig farming area of 2,000 or more standing pig population.

2. AERODROME:

*(a)* Construction of a new aerodrome involving a runway of 1,000 metres or longer.

*(b)* Construction of aerodrome in or adjacent or near to any state park, national park, national marine park, island surrounding marine park or environmentally sensitive area.

3. DRAINAGE AND IRRIGATION:

*(a)* Construction of man-made lakes and artificial enlargement of lakes with surface areas of 50 hectares or more in or adjacent or near to environmentally sensitive area.

*(b)* Any drainage of wetland, wild-life habitat or of dry inland forest covering an area of 20 hectares or more.

4. FISHERIES:

Land based aquaculture projects accompanied by clearing of mangrove forest, peat swamp forest or fresh water swamp forest covering an area of 50 hectares or more.

5. FORESTRY:

*(a)* Conversion of forest at 300 meters or more above mean sea level to other land use covering an area of 100 hectares or more.

*(b)* Logging or conversion of forest to other land use within—

(i) a catchment area of reservoirs used for municipal water supply, irrigation or hydro-power;

(ii) an area adjacent or near to any state park, national park or national marine park;

(iii) any state park, national park or national marine park; or

(iv) an area gazetted as water catchment forest under the National Forestry Act 1984 [*Act 313*].

*(c)* Logging, or cutting or taking of timber from forest at 300 meters or more above mean sea level covering an area of 100 hectares or more, outside permanent reserved forest.

*(d)* Logging, or cutting or taking of timber covering an area of 500 hectares or more.

*(e)* Development of planted forest covering an area of 500 hectares or more.

*(f)* Conversion of an area of—

(i) mangrove forest;

(ii) peat swamp forest; or

(iii) fresh water swamp forest,

for industrial, housing or agricultural use covering an area of 50 hectares or more.

*(g)* Clearing of mangrove forest, peat swamp forest or fresh water swamp forest on islands adjacent to any national marine park.

6. INDUSTRY:

*(a)* Non-ferrous:

(i) Primary smelting aluminium (all sizes).

(ii) Primary smelting copper (all sizes).

(iii) Primary smelting other non-ferrous (producing 50 tonnes product or more per day).

*(b)* Cement:

With clinker production capacity of 30 tonnes or more per hour.

*(c)* Iron and steel:

(i) Using iron ore as raw materials for production of 100 tonnes or more per day.

(ii) Using scrap iron as raw materials for production of 200 tonnes or more per day.

*(d)* Petrochemicals:

Production capacity of each product or combined product of 50 tonnes or more per day.

*(e)* Pulp, or pulp and paper:

Production capacity of 50 tonnes or more per day.

*(f)* Recycle paper industry:

Production capacity of 50 tonnes or more per day.

7. LAND RECLAMATION:

*(a)* Coastal reclamation or land reclamation along river banks involving an area of 50 hectares or more.

*(b)* Coastal reclamation or land reclamation along river banks within or adjacent or near to environmentally sensitive areas.

*(c)* Reclamation for man-made island.

8. MINING:

*(a)* Mining of minerals in new areas involving large scale operation.

*(b)* Mining of minerals within or adjacent or near to environmentally sensitive area.

9. PETROLEUM:

*(a)* Construction of oil refineries.

*(b)* Construction of gas refineries.

*(c)* Construction of oil and gas refineries.

10. PORTS:

*(a)* Construction of a new port.

*(b)* Construction of a new fishing port.

11. POWER GENERATION AND TRANSMISSION:

*(a)* Construction of coal fired power station and having the capacity of 10 megawatts or more with or without transmission line.

*(b)* Construction of nuclear-fuel power station with or without transmission line.

12. DEVELOPMENT IN COASTAL AREA, NATIONAL PARK AND STATE PARK:

Development of tourist facilities, recreational facilities or other facilities—

*(a)* in any national park or state park; or

*(b)* on any island in surrounding waters which has been gazetted as a national marine park or marine reserve under the Fisheries Act 1985 [*Act 317*].

13. DEVELOPMENT IN SLOPE AREA:

*(a)* Development or land clearing of 50 per cent or more of an area with slope greater than or equal to $25^0$ but lesser than $35^0$.

*(b)* Construction of road, tunnel or bridge traversing an area with slope greater than or equal to $35^0$.

14. WASTE TREATMENT AND DISPOSAL:

*(a)* Scheduled waste:

(i) Construction of thermal treatment plant.

(ii) Construction of off-site recovery plant for lead acid battery wastes.

(iii) Construction of off-site recovery plant or treatment facility that generates significant amount of wastewater which is located at the upstream of public water supply intake.

(iv) Construction of secure landfill facility.

*(b)* Solid waste:

(i) Construction of thermal treatment plant.

(ii) Construction of sanitary landfill facility.

(iii) Construction of transfer station.

15. CONSTRUCTION OF DAM:

*(a)* Construction of dam or impounding reservoir for the purpose of irrigation, flood mitigation, control of siltation, recreational, water supply or any other reason with a surface area of 100 hectares or more.

*(b)* Dam and hydro-electric power scheme with either or both of the following:

(i) dam of 15 metres or more in height and ancillary structures covering a total area of 40 hectares or more;

(ii) reservoir with a surface area of 100 hectares or more.

16. TRANSPORTATION:

*(a)* Construction of new routes or branch line for a mass rapid transport project.

*(b)* Construction of new railway route or railway branch lines.

17. RADIOACTIVE MATERIALS AND RADIOACTIVE WASTE:

Any activity specified in this Schedule and the First Schedule using radioactive materials and generating radioactive wastes.

Made 5 August 2015
[as(s)91/110/919/014 S.K 02 Jld 2; PN(PU2)280/XVI]

DATO' SRI DR. HAJI WAN JUNAIDI BIN TUANKU JAAFAR
*Minister of Natural Resources and Environment*

Appendix 7

# An Example of Environmental Assessment Matrix

Key:

| | |
|---|---|
| | Insignificant and excluded from Matrix |
| √ | Environmental impact that is potentially but on a temporary basis and will assue equilibrium after certain period of time |
| × | Environmental impact that is potentially significant but about which there is insutificient data to make a reliable prediction. Close monitoring and control is recommended |
| √ | Potentially significant adverse environmental impact for which a design solution has been identified |
| √ | Residual and significant adverse environmental impact |
| × | Significant environmental anhancement |

| PROJECT ACTIVITIES | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SITE INVESTIGATION | | | CONSTRUCTION | | | | | | | OPERATION AND MAINTENANCE | | | | |
| SURVEY | INVESTIGATION | LAND ACQUISITION | ACCESS ROADS | SITE CLEARING | EXCAVATION | DRAINAGE | EROSION CONTROL | UTILITIES | ABANDOMENT | EQUIPMENT OPERATION | WASTE DISPOSAL AND RECOVERY | PRODUCT STORAGE | SPILLS AND LEAKS | ABONDMENT PLAN |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Identification of Activites | | | | | | | | | | | | | | | | |
| ENVIRONMENTAL COMPONENTS | PHYSICOCHEMICAL | LAND | Landforms | | | | | | | | | | | | | | | | |
| | | | Soil Profile | | | | | | | | | | | | | | | | |
| | | | Soil Composition | | | | | | | | | | | | | | | | |
| | | | Slope Stability | | | | | | | | | | | | | | | | |
| | | | Subsidence and Compaction | | | | | | | | | | | | | | | | |
| | | | Seismicity | | | | | | | | | | | | | | | | |
| | | | Flood Plains/Swamps | | | | | | | | | | | | | | | | |
| | | | Land Use | | | | | | | | | | | | | | | | |
| | | | Engineering and Mineral Resources | | | | | | | | | | | | | | | | |
| | | | Buffer Zones | | | | | | | | | | | | | | | | |
| | | SURFACE WATER | Shore Line | | | | | | | | | | | | | | | | |
| | | | Bottom Interface | | | | | | | | | | | | | | | | |
| | | | Flow Variation | | | | | | | | | | | | | | | | |
| | | | Water Quality | | | | | | | | | | | | | | | | |
| | | | Drainage Pattern | | | | | | | | | | | | | | | | |
| | | | Water Balance | | | | | | | | | | | | | | | | |
| | | | Flooding | | | | | | | | | | | | | | | | |
| | | | Existing Use | | | | | | | | | | | | | | | | |
| | | GROUND WATER | Water Table | | | | | | | | | | | | | | | | |
| | | | Flow Regime | | | | | | | | | | | | | | | | |
| | | | Water Quality | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Recharge | | | | | | | | | | | | | | | | | |
| | | | Aquifer Characteristics | | | | | | | | | | | | | | | | | |
| | | | Existing Use | | | | | | | | | | | | | | | | | |
| | | ATMOSPHERE | Air Quality | | | | | | | | | | | | | | | | | |
| | | | Air Flow | | | | | | | | | | | | | | | | | |
| | | | Climatic Changes | | | | | | | | | | | | | | | | | |
| | | | Visibility | | | | | | | | | | | | | | | | | |
| | | NOISE | Intensity | | | | | | | | | | | | | | | | | |
| | | | Duration | | | | | | | | | | | | | | | | | |
| | | | Frequency | | | | | | | | | | | | | | | | | |
| | BIOLOGICAL | SPECIES AND POPULATIONS | Terrestrial Vegetation | | | | | | | | | | | | | | | | | |
| | | | Terrestrial Wildlife | | | | | | | | | | | | | | | | | |
| | | | Other Terrestrial Fauna | | | | | | | | | | | | | | | | | |
| | | | Aquatic/Marine Flora | | | | | | | | | | | | | | | | | |
| | | | Fish | | | | | | | | | | | | | | | | | |
| | | | Other Aquatic/Marine Fauna | | | | | | | | | | | | | | | | | |
| | | HABITATS AND COMMUNITIES | Terrestrial Habitats | | | | | | | | | | | | | | | | | |
| | | | Terrestrial Communities | | | | | | | | | | | | | | | | | |
| | | | Aquatic Habitats | | | | | | | | | | | | | | | | | |
| | | | Aquatic Communities | | | | | | | | | | | | | | | | | |
| | | | Estuarine Habitats | | | | | | | | | | | | | | | | | |
| | | | Estuarine Communities | | | | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Marine Habitats | | | | | | | | | | | | | | | |
| | | | Marine Communities | | | | | | | | | | | | | | | |
| | HUMAN | HEALTH AND SAFETY | Physical Safety | | | | | | | | | | | | | | | |
| | | | Psychological Well-Being | | | | | | | | | | | | | | | |
| | | | Parasitic Disease | | | | | | | | | | | | | | | |
| | | | Communicable Disease | | | | | | | | | | | | | | | |
| | | | Physiological Disease | | | | | | | | | | | | | | | |
| | | SOCIAL AND ECONOMIC | Employment | | | | | | | | | | | | | | | |
| | | | Housing | | | | | | | | | | | | | | | |
| | | | Education | | | | | | | | | | | | | | | |
| | | | Utilities | | | | | | | | | | | | | | | |
| | | | Amenities | | | | | | | | | | | | | | | |
| | | | Property & Settlement | | | | | | | | | | | | | | | |
| | | AESTHETIC AND CULTURAL | Landforms | | | | | | | | | | | | | | | |
| | | | Biota | | | | | | | | | | | | | | | |
| | | | Wilderness | | | | | | | | | | | | | | | |
| | | | Water Quality | | | | | | | | | | | | | | | |
| | | | Atmospheric Quality | | | | | | | | | | | | | | | |
| | | | Climate | | | | | | | | | | | | | | | |
| | | | Tranquility | | | | | | | | | | | | | | | |
| | | | Sense of Community | | | | | | | | | | | | | | | |
| | | | Community Structure | | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Man-Made Objects | | | | | | | | | | | | | | | | |
| | | | Historic Places or Structure | | | | | | | | | | | | | | | | |
| | | | Religious Places or Structure | | | | | | | | | | | | | | | | |
| | | | Landscape | | | | | | | | | | | | | | | | |

**Appendix 9**

**FIRST / SECOND SCHEDULE**

**ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

**NAME OF PROJECT PROPONENT**

**PROJECT TITLE**
**VOLUME X/Y**

PROPOSED PROJECT GRAPHICS (ILLUSTRATION)

**NAME OF CONSULTANCY FIRM**
**ADDRESS**
**TEL/FAX**

**Table of Content**



EIA Report format

The format of the Report and its content are explained as follows:-

EIA Report Format for Preliminary Pages

At a minimum, the preliminary pages shall include the Environmental Pledge by the Project Proponent, the Declaration by the Qualified Person (i.e. EIA Consultant) and the Executive Summary. These are briefly described below:

(a) Project Proponent's Environmental Pledge

The Project Proponent shall make a declaration on the EIA Report prepared by the Qualified Person (EIA Consultant). The declaration shall be type written on the official letterhead of the company of the Project Proponent as follows:-

"I hereby declare that the entire EIA Report is the product of the Qualified Person (i.e. the EIA Consultant) engaged by my company and all the facts stated in the Report and the accompanying information are to the best of my knowledge and belief true and correct, and that I have not withheld or distorted any material facts. I agree and I undertake the responsibility to implement all the pollution prevention and mitigation measures (P2M2s) described in the EIA Report, in the Environmental Management Plan (EMP), and in the LD-P2M2* as proposed by the EIA Consultant. I have allocated sufficient funds for the above purpose.

Name of Project Proponent: ……..
NRIC Number: …….
Designation: …….
Signature: …… Date: …….
Company's stamp:

(Note*: LD-P2M2 stands for Land Disturbing Pollution Prevention and Mitigation Measures)

(b) Qualified Person's Declaration

The EIA Consultant team leader shall make a declaration on the EIA Report which shall be type written on the official letterhead of the company of the EIA Consultant as follows:-

"I declare that the entire EIA Report is the product of my own work and the work of my team members (i.e. other consultants who are also Qualified Persons) who worked under my supervision and all the facts stated in the Report and the accompanying information are to the best of my knowledge and belief true and correct and that I have not withheld or distorted any material facts. I have briefed the Project Proponent on the content of the Report and highlighted to him all the pollution prevention and mitigation measures (P2M2s) described in it, and in the Environmental Management Plan (EMP), and in the LD-P2M2*, and the Project Proponent has agreed to implement them (i.e. P2M2). "

Name of EIA Consultant team leader: ……..
NRIC Number: …….
Designation: …….
Signature: …… Date: …….
Company's stamp:

(Note*: LD-P2M2 stands for Land Disturbing Pollution Prevention and Mitigation Measures)

(c) Executive Summary

The Executive Summary is an important part of the EIA Report. It shall be well written not only because it will be read widely and reviewed by the DOE, other authorities, and the public, but it is also an essential gateway for the Report to get read. The Executive Summary shall be written in a non-technical language and provides a summary of the proposed project, main issues associated with its implementation, and the pollution prevention and mitigating measures (P2M2s) to be taken to prevent and mitigate the potential impacts to the receptors.

The Executive Summary shall be concise and written in English and Bahasa Malaysia. The format of both versions shall be similar. The Executive Summary, in addition to summarizing the main findings and issues, shall contain the following information:

(i) Name / Title of project

(ii) A description of the project and the environment

(iii) Name and contact details of the Project Proponent (Contact person, address, telephone number, e-mail address)

(iv) Name of the registered EIA consulting firm and contact details (EIA team leader, address, telephone number, e-mail address)

(v) Location of the project (including where applicable, coordinates, lot numbers, sub-district and district name)

(vi) Relevant maps showing project location and sensitive receptors

(vii) Flow diagrams of main processes (for industrial and other relevant activities)

(viii) A tabulation of potential impacts, their magnitude and proposed pollution prevention and mitigation measures (P2M2s) as shown below:

Table: Summary of potential impacts, their magnitude and proposed pollution prevention and mitigation measures

| Significant potential impacts | Magnitude of significant potential impacts | P2M2* | Reference page** |
|---|---|---|---|
| | | | |

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(Notes-

*P2M2s: Pollution prevention and mitigation measures. P2M2s shall be those which can be described as state of the art technologies or best available technologies, or industry best practices.

** Reference page: page in the EIA Report)

(ix) A description of performance monitoring (PM) program and compliance monitoring (CM) for pollution prevention and mitigation measures (P2M2) and tabulation of relevant PM parameters, recommended limits, monitoring locations and frequencies.

(x) Whenever applicable, a description of impact monitoring program (IM), monitoring locations and frequencies.

The soft copy version (portable document format - PDF) of THE Executive Summary shall be submitted to the DOE (EIA Secretariat) together with the soft copy of the full EIA Report. The softcopy will be uploaded to the Enviro Knowledge Management Centre (EKMC) and website of the DOE for public display.

EIA Report Format for Main Text

The EIA Report format for the main text or body of the EIA Report shall contain at least the following chapters explained as follows:

## Chapter 1: Introduction

### 1.1 Title of Project

The project title shall identify the type of proposed project and its specific location. The title shall also indicate if the project is part of a larger project proposal.

This Chapter shall contain at a minimum the following information:

(i) Name / Title of project
(ii) Name and contact details of the Project Proponent (Contact person, address, telephone number, e-mail address)
(iii) Name of the registered EIA Consulting firm (EIA team leader, address, telephone number, e-mail address)
(iv) Location of the project (including where applicable, coordinates, lot numbers, sub-district and district name)
(v) Relevant maps showing project location and sensitive receptors

### 1.2 Project Proponent and Qualified Persons

This chapter shall state clearly the identity of the Project Proponent whether it is a public or private organization. The details of the EIA consulting firm and the consultants engaged for the EIA study shall be provided. The EIA consultant team shall be led by a team leader who shall be responsible for supervising the conduct of the EIA study and for coordinating the writing of

entire EIA Report. All the members of the EIA consulting team (the team leader and the subject matter consultants (SMCs) shall be Qualified Persons registered with the DOE under the EIA Consultant Registration Scheme (www.doe.gov.my.)

## 1.3 Legal Aspects

### 1.3.1 Prescribed activity is subject to section 34A, Environmental Quality Act, 1974

This subparagraph shall state clearly that the proposed development project is a prescribed activity and EIA study is carried out and EIA Report is prepared to comply with the legal requirement under section 34A, Environmental Quality Act, 1974.

### 1.3.2 Conformance of proposed project to government's development plans

This subparagraph shall make a definitive statement stating that the proposed project concept and project location is in line with any development plans, policies or decisions of the Government of Malaysia prior to the EIA study, namely (but not limited to the following):-

(i) National Physical Plan.
(ii) Structure Plan.
(iii) Local Plan.
(iv) Regional Plan (inter-state planning).
(v) Guidelines on Siting and Zoning of Industries and Residential Area.

## Chapter 2: Terms of Reference of EIA Study

This chapter shall provide the TOR of the EIA study which has been endorsed by the DOE. The reference of the endorsement shall be cited (example TOR meeting or DOE's letter).

## Chapter 3: Statement of Need

The statement of need shall outline the background of the project and the reasons for it being proposed. It shall establish social, economic or other needs for the project and shall conclude with a definitive statement of the aim of the project. The statement of need for the proposed project shall be substantiated.

## Chapter 4: Project Options

This chapter shall discuss project options including the advantages and disadvantages from the perspective of technical, economic, social, and environmental aspects of the following alternatives (wherever applicable):

(i) Site Options
(ii) Project Options (including "no project option", and "scaled-down project option")
(iii) Technology Options
(iv) Raw Materials Options
(v) Construction Method Options
(vi) Layout Options
(vii) Alignment Options
(viii) Operation Options

## Chapter 5: Project Description

This chapter shall provide information and discuss the following aspects:

(i) A description of the project concept with the following details: size and capacity, land requirements, raw materials, energy source and consumption, water source and consumption, labor requirements, transportation, support facilities, investment, market, and special infrastructural requirements

(ii) Maps and diagrams (photographs might also be useful to describe some projects)

(iii) A summary of the technical, economic, and environmental features that are essential to the project

(iv) Proposed project implementation schedule and project lifespan (wherever applicable)

(v) Comparison with the existing plant/project in Malaysia or elsewhere

(vi) Operation and maintenance activities

## Chapter 6: Existing Environment

This chapter shall explain clearly the sources of information used to describe the existing (or baseline) environment. The description of the existing environment shall conform to the following specifications, wherever appropriate:

(i) The zone of study is a minimum 5 kilometers radius from project boundaries except for linear projects where the zone of study is a minimum of 0.5 kilometers

(ii) The baseline conditions of the physico-chemical, biological, social, and economic setting prior to the implementation of the project is described in qualitative and quantitative terms

(iii) Special attention is given to environmental sensitive areas, and areas of special or unique scientific, socio- economic or cultural values

Uncertainties of information obtained shall be discussed.

## Chapter 7: Evaluation of Impacts

### 7.1 Identification and Prediction Assessment of Impacts

This subchapter shall present an analysis of the impacts identified and predicted which shall be described in quantitative and qualitative terms. An assessment matrix such as the one shown in **Appendix 7** shall be used to summarize the characteristics of the impacts. The impacts shall be characterized from the following aspects: their magnitude, extent, duration, and significance.

The discussion on impact identification and prediction shall cover following aspects and conform to the following requirements:

(a) The zone of impact shall be identified based on size and complexity of the project and supported by appropriate modeling exercise;

(b) The nature of the environmental effect (e.g. air quality changes; water quality changes);

(c) The source of the impact (e.g. oil-fired furnace chimney emission); and

(d) The nature of the impact (e.g. human health, visual esthetics).

## 7.2 Detailed Examination of Impacts

This subchapter contains information on the potential impacts predicted as a result of the implementation of the project and how the impacts were assessed. The methodologies used for predicting the impacts shall be described. For example, for air pollution impact studies, the outputs of modeling exercise (i.e. the highest short term and long term averages of pollutant concentrations at specific receptors) shall be presented and compared with the air quality standards. To indicate general impacts of pollutant emission in the study area, contours of pollutant concentration shall also be presented on a map using ArcGIS as GIS platform.

Similarly for other impact studies involving the modeling of water quality, ground water quality, noise, risk, sediment dispersion, oil slick and liquefied natural gas (LNG) spill, hydrology and hydrodynamics, etc., the outputs shall be presented in an easy to understand fashion. All modeling exercises shall undergo all the stages of modeling, namely, model verification, calibration, and validation. The uncertainties in the models shall be discussed thoroughly. Copies of model files in electronic format shall be submitted to the DOE's.

Depending on the characteristics of the project, impact studies may also involve economic evaluation of environmental impacts and risk assessment, which shall be performed wherever relevant.

### 7.3 Project Evaluation

In this subchapter the EIA Consultant shall attempt to quantify the environmental and development tradeoffs anticipated from the proposed project by using the cost-benefit evaluation technique.

## Chapter 8: Mitigation Measures

### 8.1 Adherence to DOE Guidelines

In the process of identifying the appropriate pollution prevention and mitigation measures (P2M2s), the technologies and practices which can be described as “the state of the art” or “best available technologies” (BATs), or “industry best practices” shall be evaluated and discussed in this subchapter. This applies to all stages of project implementation including the construction and operation stages.

The requirements and specifications stipulated in the following documents issued by the DOE shall be adhered to:

(a) Guidance Document for addressing soil erosion and sediment control aspect in EIA Report as per **Appendix 3**.

(b) Guidance Document for the preparation of Land Disturbing Pollution Prevention and Mitigation Measures (LD-P2M2) as per **Appendix 4**.

(c) Other relevant guidelines and guidance documents issued by the DOE pertaining to environmental-related system and management as per **Appendix 5.**

Other documents issued by the DOE from time to time related to EIA process which may cover other environmental aspects shall also be adhered to.

## 8.2 Proposed Mitigation Measures

This subchapter contains a discussion of all the mitigation measures which have been adopted and incorporated into the design and implementation of the project to effectively eliminate, prevent, minimize predicted adverse impacts. For each potential adverse impact, at each stage of project implementation, the mitigation measure shall be identified, documented and costed. Mitigation measures include all actions and activities taken, put in place, or executed which could be structural, non-structural, procedural, or administrative in nature, to mitigate the adverse impacts. The Project Proponent shall provide evidence to show his commitment to implement all the proposed pollution prevention and mitigation measures (P2M2s).

# Chapter 9: Environmental Management Plan (EMP)

## 9.1 Land Disturbing Pollution Prevention and Mitigation Measures

If the proposed development project involves any activity that disturbs land surface, a plan to mitigate soil erosion on the project site shall be prepared and presented in this subchapter. The requirements and specifications stipulated in the Guidance Document for the Preparation of the Document on Land Disturbing Pollution Prevention and Mitigation Measures (LD-P2M2) shall be complied with.

## 9.2 Proposed Monitoring Programme

Environmental monitoring comprises three types of monitoring, namely: Performance monitoring (PM), compliance (CM), and impact monitoring (IM). Each type shall be detailed out in this chapter.

### 9.2.1 Performance monitoring (PM)

This subchapter shall contain a description of performance monitoring (PM) program for all pollution prevention and mitigation measures (P2M2) proposed for the project. A tabulation of relevant PM parameters, recommended limits, monitoring locations and frequencies, and instrumentation and personnel required shall also be discussed.

### 9.2.2 Compliance monitoring (CM)

A description of compliance monitoring (CM) program for all pollution prevention and mitigation measures (P2M2) shall be included in this subchapter. A tabulation of relevant CM parameters, discharge or emission standard, monitoring locations and frequencies, and instrumentation and personnel required shall also be presented.

### 9.2.3 Impact monitoring (IM)

The requirement on impact monitoring (IM) shall be evaluated on a case to case basis. The general consideration is that, IM is required only in cases where pollution prevention and mitigation measures (P2M2s) conforming to the category of best available technologies (BATs) cannot be clearly identified or there exist uncertainties in the long term impact to the receptors. The above evaluation shall be presented in this chapter. If IM is required, a description of the IM program, monitoring parameters, monitoring locations and frequencies shall be described. A discussion of

how long the IM program will be carried out, instrumentation and personnel required shall also be presented.

### 9.2.4 Environmental auditing

Proposal for performing an environmental audit of the project, after its completion, to assess the overall environmental compliance, the compliance with the environmental mainstreaming requirements and the fulfillment of the Environmental Pledge by the Project Proponent shall be discussed in this subchapter.

## Chapter 10: Study Findings

In this Chapter the EIA Consultant shall draw appropriate conclusions of the study findings from the perspective of the impacts of the proposed project. The conclusions shall be summarized in a series of brief statements which refer to the relevant sections of the Report.

## References

Provide full citation of all the references used.

## Appendices

The appendices may include the following:

(a) Input data and results of any modelling studies (soft and hard copy)

(b) Supporting documents such as Site Suitability Assessment, Environmental Scoping Information, etc.

(c) Other relevant documents such as list of attendance, meeting minutes, and photographs of public engagements, etc.