



**MINISTRY OF HEALTH  
MALAYSIA**

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**HEALTH REQUIREMENTS FOR HEALTH IMPACT  
ASSESSMENT (HIA) IN ENVIRONMENTAL IMPACT  
ASSESSMENT (EIA)**

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Thematic Working Group (TWG) 7 – Health Impact Assessment  
National Environmental Health Action Plan (NEHAP)  
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## Preamble

Health is the state of being free from illness or injury both physical and psychosocial. It refers to the individual as well as to the general population. Public health is a concern of every nation contributes to prosperity and underlies national security. The World Health Organisation (WHO) defines health as 'a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity' (WHO, 1948).

Public health impact is the measurable quantum that associate exposure factors and health outcomes. HIA in EIA is a proxy closes to measure public health impact through analysis of health determinants over seamlessly wide health spectrum in particular enveloping both environmental and occupational factors. Although HIA in EIA in this context refers to DOE legal requirements however MOH as the gatekeeper and guardian to health is much aware of legal provisions for occupational health under DOSH. MOH caution over health fragmentation and tunnel vision approach to health. HIA in EIA provide legal and priority in the evaluation of risk by systematic identification of intervention strategies. Prevention is the best strategy to avoid diseases and injuries. The 3 levels of prevention in health encompasses the preventive, curative and rehabilitative aspect, reflecting a wholesome and holistic approach.

The main intention when undertaking HIA is to provide information to support decision-making with regards to EIA project proposal report. The potential health impacts of a proposal both beneficial and harmful are put forth and suggestions ways to minimise the harms and maximise the benefits. HIA evaluation offers decision-makers the possibility of changing a proposal to protect and improve health, and to reduce inequities, thereby achieving health gain maximally.

This booklet is intended to provide insights into enhancing and improving specifically quality of HIA reports, as well as EIA reports in general. This booklet complement and supplement available formal document namely the Guidance Document On Health Impact Assessment (HIA) In Environmental Impact Assessment (EIA) (June 2012) by the DOE.

Last but not least it is hoped that this booklet will be useful and stimulate HIA practitioners to submit reports meeting the expectations and altruistic ideals of the MOH.

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Dr. Rohani Mat Bah - SHD Sarawak / Member of TWG 7  
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Sham Izuddi Mat Hussin - DOE / Member of TWG 7  
Dr. Abdul Rahman Mahmud - DOE / Member of TWG 7  
Dr. Zati Sharip - NAHRIM / Member of TWG 7  
Dr. Bashirah Fazli - NAHRIM  
Muhammad Azroie Mohamed Yusoff - NAHRIM  
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Azlina Omar - DOE  
Prof. Dr. Jamal Hisham Hashim - HIA Consultant  
Prof. Dr Mazrura Sahani - HIA Consultant  
Prof. Dr. Mohd. Hasni Ja'afar – HIA Consultant  
Dr. Noor Artika Hassan - HIA Consultant  
Niza Samsuddin - HIA Consultant  
Zairul Ain Zulkaflli – Liaison Officer TWG 7 (HIA)  
Dalila Farhana Baharuddin – Secretariat of TWG 7  
Nur Iylia Hidayah Fahmi – Secretariat of TWG 7  
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Technical Proof Reader

## Abbreviations

ATSDR	Agency for Toxic Substances and Disease Registry
CAC	Codex Alimentarius Commission
CDC	United States Centre of Disease Control and Prevention Agency
DCD	Disease Control Division ( <i>Bahagian Kawalan Penyakit</i> ) MOH
DOE	Department of Environment
DOSH	Department of Occupational Health and Safety
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
ESD	Engineering Services Division ( <i>Bahagian Perkhidmatan Kejuruteraan</i> ) MOH
FDA	United States Food and Drug Administration
HIA	Health Impact Assessment
HI	Hazard Index
HQ	Hazard Quotient
HRA	Health Risk Assessment
IRIS	Integrated Risk Information System
KPAS	<i>Kesihatan Pekerjaan dan Alam Sekitar KKM</i>
LADD	Lifetime Average Daily Dose
LCR	Lifetime Cancer Risk
MOH	Ministry of Health
Mg/l	Milligrams per litre
MSDS	Material Safety Data Sheet
NAHRIM	National Hydraulic Research Institute of Malaysia
NEHAP	National Environmental Health Action Plan
OSHA	Occupational Safety and Health Act
PIK	<i>Pusat Informatik Kesihatan KKM</i>
PKD	<i>Pejabat Kesihatan Daerah</i>
POP	Persistent Organic Pollutants
RfC	Reference Concentration
RfD	Reference Dose
SHD	State Health Department ( <i>Jabatan Kesihatan Negeri</i> )
TWG	Thematic Working Group
USEPA	United States Environmental Protection Agency
WHO	World Health Organization

## **1.0 INTRODUCTION**

### **1.1 Background and Legal Requirement**

Environmental Impact Assessment (EIA) is an important tool to assess the impact of prescribed activities developments on the environment. The EIA reports are evaluated not only for new projects but also before any expansion or process changes developments. In Malaysia, EIA is legally required for activities prescribed under the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 2015, gazetted and enforced since 28 August 2015.

### **1.2 Importance and Justification**

Health Impact Assessment (HIA) is a critical component in the EIA process. It is a tool that systematically identify, using scientific methods, the public health consequences, both adverse and beneficial health effects resulting from proposed projects. The outcome of HIA provides the ideal platform to optimize positive health impacts and minimized negative health impacts through recommendation of mitigation measures. In addition HIA methods may also be used for post EIA management.

Health involve cross-cutting issues in project development and a holistic approach is presented. Advancing health agendas through recognition of cross cutting approaches to health will add value to the system.

Although relevant official guidance documents are available for the conduct of HIA in Malaysia there is always room for improvement. Hence this booklet complement and supplement the available document namely the 'Guidance Document on Health Impact Assessment (HIA) in Environmental Impact Assessment (EIA)' developed by the DOE (2012).

### **1.3 Purpose and Emphasis**

The purpose of HIA is to synthesize evidence based on science and provide recommendation to decision-makers in order to prevent adverse health effects, preserve community health and proposed practical health mitigation measures. Recognizant of environmental health hazards and its potential health effects allow hypothetical logical causal pathway through air, water and soil to be established. Inappropriate assessment result in erroneous reporting of sensitive receptors.

### **1.4 Objectives and Goals**

The primary objective of this booklet is to provide guidance and consideration to HIA expert person under DOE registration system as well as to authorised HIA reviewers under MOH.

The objectives of this document are: -

- i. To list health requirements for HIA study.
- ii. To provide instructions to project proponents and relevant agencies on procedural steps required for submission and review of HIA.
- iii. To provide appropriate application of accepted methodologies complementing Guidance Document on HIA in EIA (2012).

### **1.5 Target Groups**

This document is intended to provide better understanding from MOH policy perspectives and disease program priorities, to stakeholders as follows:

- i. Project proponents;
- ii. HIA Consultants;
- iii. DOE Officers;
- iv. Review Panel Members; and
- v. Other relevant stakeholders.

## **2.0 THE SCOPE**

This guide provide general requirements for conducting and reporting HIA within EIA in Malaysia and taking into consideration health priorities of the day. This guide is not a definitive and exhaustive reference. Recognizant that HIA within EIA is site and project specific, it is thus not practical to provide specific methodologic details for each project type. A range of useful guidance and tools has been developed by other credible international body and should be referred to. Should there be a specific requirement for assessing impact via any exposure route/pathway which is not mentioned in this guide the subject consultant shall refer to methods developed and published by international organisation of repute namely to mention a few, USEPA, ATSDR, U.N and WHO.

## **3.0 THE QUALIFIED PERSON**

A person qualified to conduct HIA is defined as a person registered with the EIA Consultant Registration Scheme, DOE and designated subject specialist in HIA. The subject consultant is expected to have profound knowledge and experiences in public health applied to the field of HIA evaluation methods. As such a qualified person are well versed in subject matter pertaining to disease prevention and control, workers health and epidemiology with appropriate credentialing agreeable to DOE and MOH.



## 4.0 REQUIREMENTS TO CONDUCT RISK ASSESSMENT IN HIA

### 4.1 HIA Process

The HIA process and methodology inclusive of descriptive epidemiology shall be in accordance with the published guidelines or equivalents. Emphasis is on the used of formal guidance documents namely the Guidance Document on HIA in EIA (DOE, 2012). Table 1 below summarized the HIA processes and expected outputs.

**Table 1: HIA Processes and Key Outputs**

STEPS	KEY OUTPUTS
<b>SCREENING</b>	All proposed project development under Schedule 1 and Schedule 2, EIA Order shall be looked into the possible <b>negative impact on health</b> of the local community.
<b>SCOPING</b>	Key objectives <ul style="list-style-type: none"> <li>• Identify stakeholders and plan for engaging them.</li> <li>• Identify <b>sensitive receptors</b> and their relevant exposure pathways.</li> <li>• Identify the main public issues and impact to be studied.</li> <li>• Define the boundaries of the HIA study.</li> <li>• Identify method for the study.</li> </ul>
<b>PROFILING OF EXISTING PUBLIC HEALTH STATUS</b>	The objective is to provide baseline informations on the health status and identify health determinants of the community prior to the construction and operation of the project. Sources of information may include: <ul style="list-style-type: none"> <li>• Primary Data – Obtained through community health surveys.</li> <li>• Relevant secondary health records from hospitals and clinics.</li> <li>• Relevant health survey reports among population within ZOI.</li> <li>• MOH PIK Health informatics statistics for aggregated data.</li> </ul>
<b>ASSESSMENT OF HEALTH IMPACT</b>	<ul style="list-style-type: none"> <li>• Predict the impact using qualitative and/or quantitative methods depending on the type of hazard identified for Preliminary Site Assessment (when required), Construction, Operational and Abandonment phases of the project.</li> <li>• Predict the impact for worst case scenario.</li> <li>• Predict the impact for acute and chronic health impacts</li> <li>• Predict the health impact for all sensitive receptors within ZOI.</li> <li>• Predict cumulative health impact.</li> <li>• Utilise probability science in health risk modelling.</li> <li>• Modelling worst case public health scenarios.</li> <li>• Predict the significant positive health impacts (if any).</li> </ul>
<b>RECOMMENDATIONS</b>	Mitigation measures and levels of prevention.
<b>REPORTING</b>	Submission of report to MOH for review by DCD, ESD and SHD.

## 4.2 Existing Public Health Status of the Local Community

Profiling of the existing community health status is an integral part of HIA in EIA framework. This may be described using primary and secondary data:

- i. Primary data when acquired through community health survey should identify all potential impacted communities and survey sample should be representative of the community. Analysis of primary data provide baseline data of the relevant health outcome of interest. Baseline health data is useful for understanding the current health status of a community, and for identifying the relevant health determinants for assessing the needs of the community. The questionnaire used in the primary data collection should be attached in the appendices.
- ii. Secondary data for relevant diseases are available from local health clinics/hospitals and are requested through the State Health Department. MOH has issued a supporting letter to DOE as in Appendix 1.
- iii. Health data for trend analysis:
  - a. Communicable diseases require monthly data for at least 1 year or aggregated annual data for at least 5 years.
  - b. Chronic non-communicable disease require annual data for at least 5 consecutive years.
- iv. Relevant health data should include both communicable and non-communicable diseases. The objective is to understand the current health status of the community residing in the impact area. This include common diseases/health problem that lead to utilization of healthcare services by the community. In addition, a more relevant health data related to the specific hazard produced by the proposed project, also need to be collected. However, since the specific diseases depend on the type of project, hence, it is not practical to specify the type of diseases that need to be collected as it varies by the project type. However, as a general guide, below is a list of environmental related diseases (non-exhaustive) that may be requested from the nearest health facility;
  - a. Vector borne diseases (Dengue, Malaria, Chikungunya, Filariasis)
  - b. Food and water borne diseases (AGE, Cholera, Typhoid, Hepatitis A, Food poisoning, dysentery)
  - c. Zoonotic diseases (Leptospirosis)
  - d. Acute respiratory infection (Upper respiratory tract infection, influenza like illness, pneumonia)
  - e. Chronic Obstructive Respiratory diseases (Asthma, COPD)
  - f. Cardiovascular diseases (Hypertension, Ischemic Heart Disease, stroke)
  - g. Other Non-communicable disease (Diabetes Mellitus)

- h. Skin diseases
  - i. Birth defect
  - j. Cancer
  - k. Childhood focus groups; obesity, slow learners, autism, epilepsy
- v. Data can be presented in the form of prevalence, incidence, health care utilization rate and hospital admission rate, depending on the relevancy of the situation.

### 4.3 Health Impact Assessment

- i. Methodology of HIA should be in accordance to the published guideline, the Guidance Document of Health Impact Assessment (HIA) in Environmental Impact Assessment published by DOE Malaysia (2012) or equivalent guidelines. Depending on the need for details assessment, if the method is not available in the HIA Guideline (2012), subject specialist can refer to methodology published by international body such as U.S EPA, ATSDR, ADB, U.N, WHO or any equivalent methodology published by developed countries.
- ii. Approaches to health risk assessment can be qualitative or quantitative depending on the type of health hazard identified. Qualitative health risk assessment involves listing and describing the probable change in health outcomes or endpoints that would be realized due to the proposed project. For example, inappropriate waste handling during the construction stage may lead to potential breeding of pests like rodents and disease vectors like mosquitoes and flies. However, the quantum of increased in the populations of rodents or mosquitoes or the subsequent increased in the prevalence of diseases associated with them, are difficult to quantify and is a recognised limitation.
- iii. Quantitative health risk assessment generates a risk value on the potential adverse health effects of human exposures to environmental hazards. Quantitative methodology of HIA should be in accordance to the Guidance Document of Health Impact Assessment (HIA) in Environmental Impact Assessment published by DOE Malaysia (2012) or equivalent guidelines.
- iv. Assessment of health impact should include acute, chronic health effects and lifetime cancer risk when applicable, AND should address both communicable and non-communicable diseases.
- v. Assessment of health impact should be conducted for all phases of project development namely Preliminary Site Assessment (when required), Construction, Operational and Abandonment phases.
- vi. Considerations and examples during the construction phase of common health hazards include:

- a. Respiratory effects from exposure to gaseous and particulate pollutants such as PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>2</sub> from on-sites fuel combustion machineries.
  - b. Vector-borne and zoonotic diseases at construction sites or living worker's quarters (example dengue fever, caused by poor housekeeping fostering breeding sites and leptospirosis due to rodent infestation)
  - c. Food and Water borne diseases like cholera, typhoid and hepatitis A due to improper sewage and solid waste disposal in the worker's camp area.
  - d. Physical injuries due to work accidents, road traffic accidents, noise induced hearing impairment from exposure to vehicle or machinery noises.
- vii. During Operation: In addition to relevant situation above, accidents from falling objects or projectiles and hazards from explosion from mishandling highly flammable materials on site (pipelines, storage tanks etc.) should be considered and adherence to safe practice and use of PPE should be noted.
  - viii. During Abandonment phase: relevant examples need to be highlighted and accounted for.
  - ix. For relevant hazards identified, their dose response abilities to cause cancer should be clearly stated in the report. The weight of evidence for cancer and their mode of action either mutagenic or non-mutagenic mode of action should be reported.
  - x. For carcinogen based on WHO IARC Classification, Group 1, Group 2A, lifetime cancer risk assessment must be conducted for all receptors with completed or potential exposure pathways.
  - xi. Carcinogen with mutagenic mode of action, lifetime cancer assessment must consider early life exposure. Aged dependent adjustment factor (ADAF) need to be applied for assessing cancer risk from carcinogen with mutagenic mode of action. For details, information on methodology for assessing early life exposure to carcinogen can be referred to the guideline produced by the U.S Environmental Protection Agency [EPA/630R-03/003F (2005) entitled "supplemental guidance for assessing susceptibility from early-life exposure to carcinogens"].

Aged dependent adjustment factor (ADAF):

- (a) Risk during the first two years of life ADAF =10
- (b) Risk for age years through < 16 years old, ADAF = 3, and
- (c) Risk for age 16 – 70 years, ADAF = 1

Total lifetime cancer risk equal to (a) + (b) + (c).

For a non-mutagenic carcinogen, no ADAF is needed.

- xii. The consultant should identify, characterize and assess pollutants that have potential multiple pathway including activity, fate and transport phenomena. Site-specific information should be used to determine which exposure pathways to evaluate in the risk assessment. Five elements of exposure pathway are described in Table 2.

**Table 2: Evaluating Exposure Pathways (EP)**

<b>Exposure Pathways (EP)</b>	
<b>Source</b>	EP1 - is there a source of contamination or release?
<b>Environmental medium</b>	EP2 - Does contamination migrate through a medium?
<b>Point of exposure</b>	EP3 - Does contamination reach an exposure point?
<b>Route</b>	EP4 - Is there a possible route of human exposure?
<b>Receptor</b>	EP5 - Are there potential exposed populations

Source: [www.atsdr.cdc.gov/hac/phamanual/ch6.html](http://www.atsdr.cdc.gov/hac/phamanual/ch6.html)

- xiii. Exposure pathway analysis should be conducted for all receptors and summarize the exposure pathway analysis outcome into three exposure categories as follows:
  - a. Completed exposure pathways: all five elements of a pathway are present.
  - b. Potential exposure pathways: one or more of the elements may not be present, but information is insufficient to eliminate or exclude the element. Potential exposure pathways indicate that exposure to a pollutant could be occurring currently, or could occur in the future.
  - c. Eliminated exposure pathways. One or more elements is absent.
- xiv. For a scenario with eliminated exposure pathway, no assessment of health impact is required. However, HIA should be conducted for receptors with completed or potential exposure pathway.
- xv. Exposure data should be based on Malaysian population whenever available. Below are examples of sources for exposure data that can be used for HIA:
  - a. Food consumption data for Malaysia:  
<http://iku.moh.gov.my/images/IKU/Document/REPORT/NHMS2014-MANS-VOLUME-3-FoodConsumptionStatisticsofMalaysia.pdf>
  - b. Adult Average Body weight for Malaysia: 66.48kg (Table 9.1, Page 287)  
<http://iku.moh.gov.my/images/IKU/Document/REPORT/NHMS2014-MANS-VOLUME-2-SurveyFindings.pdf>

- xvi. The location of highly vulnerable receptors such as schools, health care facilities, aged care facilities, source of water intake must be identified and the distance from the project site must be clearly stated. Use of GPS to record coordinates for important sites is a must.
- xvii. Multiple chemical exposure: cumulative and aggregate health risk assessment should be conducted for both cancer and non-cancer risk assessment. Aggregate health risk assessment combined exposures to a single stressor across multiple routes and multiple pathways. Cumulative health risk assessment evaluates combined exposure to multiple stressors via multiple exposure pathways that affect a single biological target.
- xviii. The specific vulnerable receptors such as schools, health care facility, aged care facilities, source of water intake must be identified, and the distance from the project site is clearly stated. Permanent workers housing within compound should be consider as sensitive receptors.
- xix. It is important synthesise and document plausible Exposure Pathways. Example Exposure Pathways as per Table 3.

**Table 3: Guide to Document the Exposure Pathways**

EXPOSURE PATHWAY ELEMENT					DISTANCE OF RECEPTOR TO THE SOURCE
SOURCE	ENVIRONMENTAL MEDIUM	POINT OF EXPOSURE	ROUTE OF EXPOSURE	RECEPTORS	
Emission of air pollution from chimney	Air	Ambient air	Inhalation	Community A	500 – 1000 m
Effluent of wastewater	Receiving water body [to be specified]	Drinking water Water Intake Point	Ingestion	Community A, B, C	30 km
	Need to specify the water intake point downstream & the distance from the source	Contact with river water	Dermal, ingestion	Recreational lake	2 km
		Eating aquatic life	Ingestion	Aquaculture	10 km
Soil	Contaminated soil via deposition of air pollutants [applicable for a few pollutants only]	Locally produced food	Ingestion	Agriculture area	500 m

- xx. In area with high possibility of intake from locally produced food/ vegetables, deposition of the air pollutants to the soil need to be assessed. The consultant need to engage the air quality expert for conducting air dispersion and deposition modelling and health risk via intake of contaminated locally produced food should be carried out. (namely for POP chemicals, heavy metals)
  - xxi. In area with high possibility of intake from farming/ aquaculture activities, concentration of pollutant in downstream water and uptake by biota need to be assessed.
  - xxii. Multiple chemical exposure
    - a. Cumulative and aggregated health risk assessment should be conducted for both cancer and non-cancer risk assessment. Aggregated health risk assessment combined exposures to a single stressor across multiple routes and multiple pathways.
    - b. Cumulative health risk assessment evaluates combined exposure to multiple stressors via multiple exposure pathways that affect a single biological target.
    - c. For chemicals impact on similar target organ, Hazard Index should be calculated by combining each relevant HQ of individual pollutant.
- For threshold contaminant. Single pathway = HQ. Multiple pathways = HI (sum of all HQ)
- xxiii. For each toxicological information, health reference values used in HRA must be properly cited in the report for evaluation purpose.
  - xxiv. Formula used in HRA should be clearly written in the report for the purpose of evaluation.
  - xxv. A suggested checklist for conducting risk assessment is as in Table 4 below.

**Table 4: Checklist for Conducting Risk Assessment in HIA**

No.	Requirement	Yes	No	Remarks
1.	Existing public health status			
	1.1 Data from health facilities			
	1.2 Community survey for health status			
2.	Environmental sanitation status			
3.	Methodology of HIA should be in accordance with the published guideline			
4.	Health Assessment completed for :			
	4.1 Acute health impact			
	4.2 Chronic health impact			
	4.3 Life time cancer risk			
5.	Lifetime cancer assessment include early life exposure			
6.	Exposure pathway element is documented for all chemicals of concern according to given labelled Table			
7.	Vulnerable groups / locations such as schools, aged care facilities, healthcare facilities, water intake point was clearly identified			
8.	Cumulative health risk assessment conducted			
9.	Aggregated health risk assessment conducted			
10.	Reference for health reference values/toxicological information of chemical of concern is included			
11.	Formula used in HRA clearly written for evaluation			
12.	Questionnaire for community survey is attached			
14.	Other public health concerns such as:			
	14.1 Communicable / Vector borne diseases			
	14.2 Food and water borne diseases			
	14.3 Workers' camp / living quarters			
	14.4 Risk of communicable diseases from foreign workers			
	14.5 Odour			
	14.6 Noise			
	14.7 Conflict			
	14.8 Impact on aborigine forest, source of food and social problem			
	14.9 Work place Injury			
	14.10 Traffic injury			



No.	Requirement	Yes	No	Remarks
15.	Other determinants of health as relevant (positive and negative). Will the project affect quality, proximity, or access to park of public spaces which is important for physical activity and quality of life			
16.	Have the potential positive health impacts been identified and discussed?			
16.	Mitigation measures			
17.	Monitoring and evaluation: 17.1 Location of monitoring station to monitor environmental quality at the sensitive receptor? (e.g school) 17.2 Water quality at workers base camp / living quarters. 17.3 Vector breeding at project site. 17.4 Foreign workers health certificate.			

#### 4.4 Positive Health Impacts

Development projects can potentially provide positive health impact to the population. The development proponents should propose the positive health impact assessment of the project before, during and abandonment especially phase the positive benefits can be inherited by the surrounding population. The distribution of those positive effects can be classified into six scopes of benefits. Those scopes are infrastructure development, workforce development, revenue, healthcare service and health improvement, nutrition plus social and quality of life.

Some of the examples of positive health impacts from the development projects are infrastructure development such as new roads for rural health services will increase the public access to local healthcare services and workforce development can be improved by the influx of occupational health professionals in the surrounding area. Healthcare services can also increase the health of the local population with the coming of the development as new healthcare facilities and better health services can be accessed by the population. These will encourage establishment and advancement to healthcare services. Health improvement and better nutrition and better water supply will lead to prevention and control of communicable diseases to the community. The assessment also has to consider if the development can have positive healthy lifestyle to the surrounding community. Thus, in turn, the overall benefits will increase the quality of life of the population as a whole.

In addition, the introduction of green technology, open spaces for healthy lifestyle activities and maintaining natural surroundings that can be preserved for public use should also be considered as potential positive health impacts of the development by the project proponents in their proposal.

The above scopes are applied across the board to the following prescribed i.e. agriculture, fisheries, forestry, industry, land reclamation, mining, petroleum, ports, power generations, waste treatment and disposal, construction of a dam, transportation and radioactive materials and wastes. However, the above scope is not final and can change from time to time according to the prescribed activities given by DOE. The development proponent has to give their positive health impact evaluation for pre-development phase, during project development and during abandonment phase.

#### **4.5 Monitoring and Evaluation**

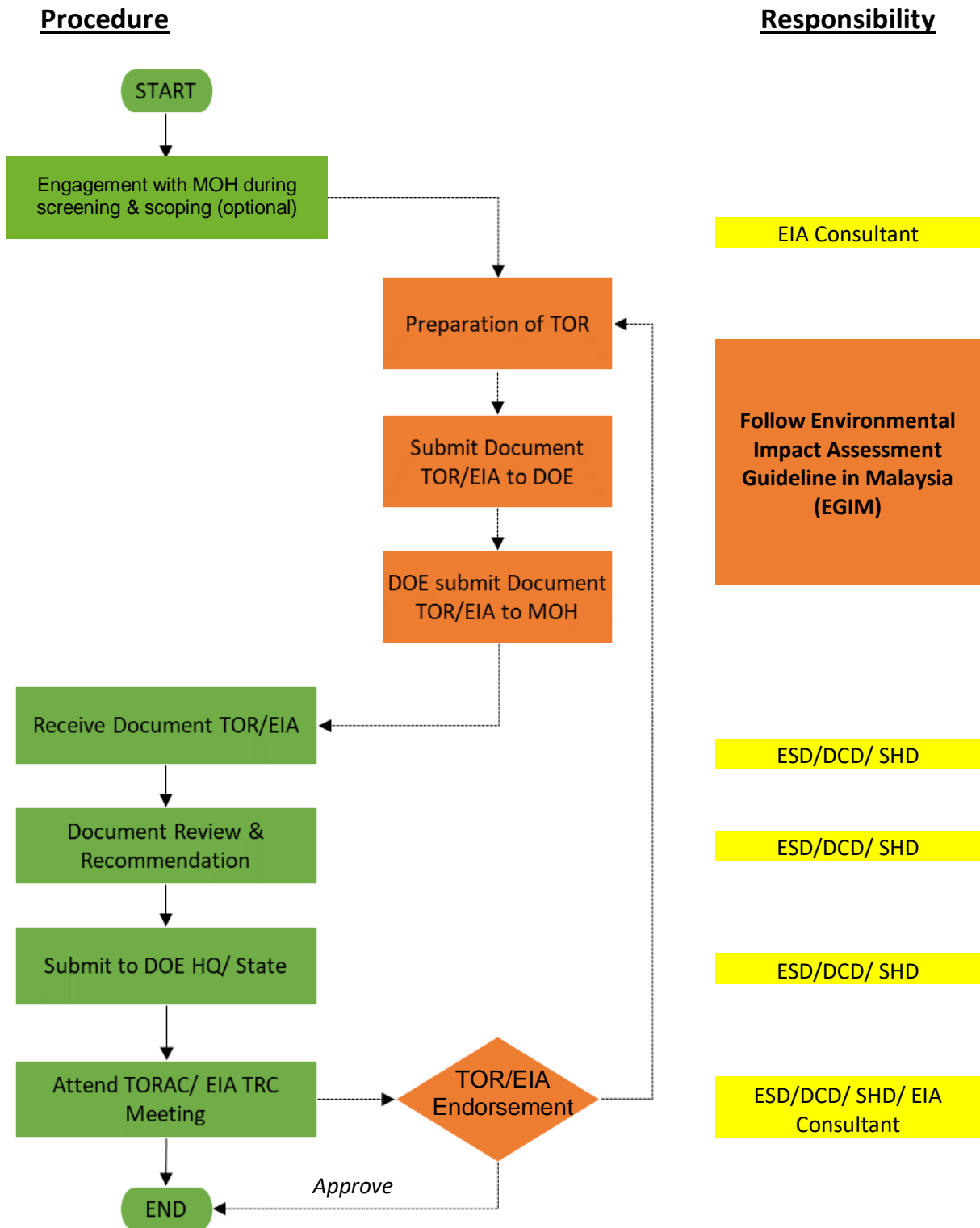
Monitoring and evaluation of HIA for existing project are often done overseas but not locally. However, in future without prejudice to cost, it need to be considered as and when current priority needs are relevantly important.

### **5.0 PROCEDURAL STEPS FOR REVIEWING HIA**

At the national level, ESD and DCD of MOH will review and prepare written feedback of EIA document (Second Schedule) to DOE. Meanwhile, at the state level, the written feedback of EIA document (First Schedule) are reviewed by *Unit Kejuruteraan and Unit Kesihatan Pekerjaan dan Alam Sekitar (KPAS)*.

The EIA Consultant / HIA Expert Person are encouraged (optional) to arrange stakeholder engagement with MOH during screening and scoping process to facilitate the preparation of Terms of Reference (TOR). Figure 1 shows the procedural steps for reviewing HIA in EIA for MOH at national and state level.

**FIGURE 1: FLOWCHART TO PROCEDURAL STEPS BETWEEN MOH AND DOE**



**Legend of Figure 1**

ESD – Engineering Services Division, MOH (Bahagian Perkhidmatan Kejuruteraan, KKM)

DCD – Disease Control Division, MOH (Bahagian Kawalan Penyakit, KKM)

SHD – State Health Department (Jabatan Kesihatan Negeri)

TOR – Term of Reference

TORAC – Term of Reference Adequacy Check

-----> Under jurisdiction of DOE

## **Afterword**

The right to health a fundamental right as embodied in WHO constitution. A precondition to physical development is ensuring health protection, security and health maintenance from cradle to grave enshrined in national development policy cross-cutting all ministries. The Implementation of National Environmental Health Action Plan Malaysia (NEHAP) was Approved by the Malaysian Cabinet on December 2012. The MOH is the lead Ministry addressing issues in environmental health and HIA is viewed holistically from the standpoint of health. Although the concept of HIA in EIA primarily serve within the sphere of DOE's legal perspective, other ministries also have legal provisions that contribute to health. HIA practitioners should be aware of this and be conscientious enough to submit useful and practical reports that serve to address overall health concerns.

## Appendix 1: Supporting Letter to DOE



PEJABAT TIMBALAN KETUA PENGARAH KESIHATAN  
OFFICE OF DEPUTY DIRECTOR GENERAL OF HEALTH  
(PENYELIDIKAN DAN SOKONGAN TEKNIKAL)  
(RESEARCH AND TECHNICAL SUPPORT)  
KEMENTERIAN KESIHATAN MALAYSIA  
MINISTRY OF HEALTH MALAYSIA  
Aras 12, Blok E7, Parsel E, Presint 1  
Level 12, Block E7, Parcel E, Precinct 1  
Pusat Pentadbiran Kerajaan Persekutuan  
Federal Government Administrative Centre  
62590 PUTRAJAYA

Tel : (03) 88832543  
Fax : (03) 88895184

Ruj. Tuan:  
Ruj. Kami: (32)dIm.KKM-207/TKPK(P&ST)/(2)  
BHG. 35  
Tarikh: 20 Mei 2009



Ketua Pengarah Alam Sekitar  
Jabatan Alam Sekitar  
Kementerian Sumber Asli & Alam Sekitar  
Aras 3, Podium 3, Wisma Sumber Asli  
No. 25, Persiaran Perdana, Presint 4  
62574 W.P. Putrajaya.  
(U.P.: Puan Halimah Hassan)

Puan,

### KEPERLUAN DATA KESIHATAN DARI FASILITI KEMENTERIAN KESIHATAN MALAYSIA UNTUK KAJIAN IMPAK ALAM SEKITAR (EIA)

Merujuk kepada perkara di atas, saya terlebih dahulu mengucapkan ribuan terima kasih atas maklumbalas yang telah puan panjangkan berkaitan dengan keperluan data kesihatan dari fasiliti Kementerian Kesihatan Malaysia untuk kajian impak alam sekitar (EIA).

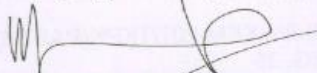
2. Sukacita dimaklumkan bahawa Kementerian Kesihatan tiada halangan membenarkan perunding kesihatan awam yang berdaftar dengan Jabatan Alam Sekitar untuk mendapatkan data yang diperlukan berkaitan dengan tahap kesihatan penduduk sedia ada serta taburan penyakit berhampiran tapak cadangan projek untuk maklumat kajian EIA.
3. Dimaklumkan juga bahawa kelulusan daripada Urusetia Jawatankuasa Tetap Penyelidikan (JKKP) Kementerian Kesihatan Malaysia adalah tidak diperlukan memandangkan ini bukan satu penyelidikan.
4. Sehubungan itu sila pihak puan maklumkan perunding kesihatan awam yang berdaftar dengan Jabatan Alam Sekitar untuk menghubungi terus Pejabat Kesihatan Daerah melalui Jabatan Kesihatan Negeri yang berkaitan untuk mendapatkan maklumat yang diperlukan.

*'Sila catatkan rujukan surat ini apabila menjawab'*

Sekian, terima kasih.

" BERKHIDMAT UNTUK NEGARA "

Saya yang menurut perintah,



**( DATO' DR. MAIMUNAH A HAMID )**  
Timbalan Ketua Pengarah Kesihatan  
(Penyelidikan dan Sokongan Teknikal),  
Kementerian Kesihatan Malaysia.

s.k.:

Semua Pengarah Kesihatan Negeri.  
(Sila Y. Bhg. Dato'/Tuan/Puan beri kerjasama yang diperlukan)

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