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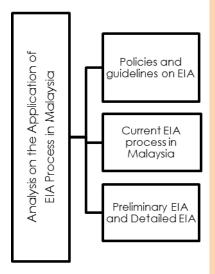
AN ANALYSIS ON THE APPLICATION OF EIA PROCESS IN MALAYSIA

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Graphical abstract



Abstract

Environmental Impact Assessment (EIA) has been introduced in Malaysia as an interactive planning tool since 1976 through the Environment Quality Act (EQA) 1975. The implementation of the EIA process in Malaysia has played a significant role in cultivating environmental protection and sustainable development practice in Malaysia. This paper focuses on the EIA process that is being implemented in Malaysia in ensuring effective application of EIA. The purpose of this paper is to present the research findings that have contributed in the analysis of the existing EIA process that is currently implemented in Malaysia. An application of qualitative research was incorporated which utilises in-depth semi-structured interviews in the data collection process. The research findings on the EIA guidelines, policies and the current EIA process are presented to provide a thorough understanding of this study.

Keywords: Environmental impact assessment (EIA), Malaysian EIA process, preliminary EIA, detailed EIA, qualitative research

Abstrak

Penilaian Kesan Alam Sekitar (EIA) telah diperkenalkan di Malaysia sebagai alat perancang interaktif sejak tahun 1976 melalui Akta Kualiti Alam Sekitar (EQA) 1975. Perlaksaan proses EIA di Malaysia telah memainkan peranan yang sangat penting dalam memupuk perlindungan alam sekitar dan amalan pembangunan mampan di Malaysia. Kertas ini memberi tumpuan kepada proses EIA yang telah dilaksanakan di Malaysia bagi memastikan perlaksaan EIA yang berkesan. Kertas ini juga mempunyai tujuan untuk membentangkan hasil penyelidikan yang telah menyumbang pada analisis yang telah dilakukan ke atas proses EIA yang kini dilaksanakan di Malaysia. Penyelidikan kualitatif yang menggunakan temu bual separa berstruktur telah diaplikasikan di dalam proses pengumpulan data. Hasil penyelidikan mengenai garis panduan EIA, dasar EIA dan proses EIA yang terkini telah dibentangkan untuk menyediakan kefahaman yang mendalam dalam kajian ini.

Kata kunci: Penilaian kesan alam sekitar (EIA), proses EIA Malaysia, preliminary EIA, detailed EIA, penyelidikan kualitatif

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1.0 INTRODUCTION

The active participations of Malaysia under various international environmental protocols have resulted to positive efforts in the environmental protection and

sustainable development adapted in Malaysia [1-3]. The increase in efforts to induce the local implementation of the sustainable development concept has emerged concerns among the local community towards the environment [3]. One of the

many results of the heightened concerns towards the environment is the application of Environmental Impact Assessment (EIA) [4]. The Environmental Impact Assessment (EIA) is a management tool to evaluate, identify and mitigate impacts of proposed development to ensure sustainable and environmental friendly development [2]. The adaptation of the EIA process in Malaysia has started since the establishment of Department of Environment (DOE) under the Environmental Quality Act (EQA) in 1975 [2], [5]-[7].

Handbook of Environmental Impact Assessment Guidelines has been published in 1987 and has promoted few weaknesses [8]. Firstly, EIA requirement in the EIA Handbook that emphasizes on the size of development has created a major issue [8]. In addition, the guidelines are being abused by the developers via submitting multiple mini projects under different subsidiaries companies [9]. Other than that, another two weaknesses found with the EIA Guidelines is it is too generic and there is also lack of specific guidelines to assist the preparation of EIA reports for diverse industries [10]. As a result, poor quality and inconsistency of EIA reports have been produced submitted to the DOE by the EIA consultants [9]-[12]. Moreover, the evaluation of the analyses made for the EIA report is often regarded as inconsistent, unsystematic and lack of scientific-based methods [10]. Kakonge [12] has regarded that an essential factor in ensuring an effective implementation of EIA process in Malaysia is to maintain a high quality of EIA reports produced.

Thus, this paper analyses the current application of the EIA process from the data collected on the topic of the policies and guidelines on EIA application in Malaysia, the current EIA process administered in Malaysia and the two types of EIA administered which are the Preliminary EIA and the Detailed EIA. The purpose of this study is to induce effective application of EIA process in Malaysia by clarifying and providing latest information in regards to the EIA process conducted in Malaysia.

In response to the introduction of Environmental **Impact** Assessment (EIA) by the National Environmental Policy (NEPA) in 1969, Malaysia has enacted a statute to manage the pollution level and intensify the environment in Malaysia in 1975 [14]-[15]. The statute is known as the Environment Quality Act (EQA) that represents a federal environmental statute to set the regulations and licensing related to the environment in Malaysia [9], [13], [15]. In the year 1976, the Environmental Impact Assessment (EIA) was officially acknowledged under the Third Malaysian Plan and the Department of Environment was established under the Environment Quality Act (EQA) in the same year [16].

Currently, the Department of Environment (DOE) is placed under the Ministry of Natural Resources and Environment (NRE). The DOE owns an important function of monitoring and administering the policies related to environmental management including all provisions under the Environment Quality Act (EQA) 1974 [9], [13]. Furthermore, the DOE is responsible in

drafting and publishing the Handbook Environmental Impact Assessment Guidelines which compiles the steps to prepare an EIA report to be submitted to the Department of Environment which includes lists of prescribed activities. The first edition of the EIA Handbook was published in 1987 and the latest edition which is the fourth edition of the EIA Handbook was published by the DOE in 2007 [16]. Accordingly, a provision under the EQA which is the EIA Order was gazetted in 1987 after the publication of the EIA Handbook [4], [13]. New developments in Malaysia that are classified under the prescribed activities are required to prepare an EIA report starting from the 1 April 1988 due to the enforcement of the EIA Order [2], [8]-[9], [17].

According to DOE [16], the EIA Handbook was published to provide proper guidelines for the preparation of the EIA reports and also to highlight the aim and purpose of EIA to the project proponents. Thus, the process of preparation of the EIA report is crucial to ensure the proposed developments do not impose negative impacts to the environment. Furthermore, the EIA report is only to be prepared by EIA consultants that are registered with the DOE [13], [16]. If any of the EIA report submitted to the DOE is prepared by a non-registered EIA consultant, the EIA report will be automatically rejected by the DOE [13].

Figure 1 illustrates the EIA process that is currently implemented in Malaysia. Under the Malaysian EIA process, there are two types of EIA reports which are the Preliminary EIA and the Detailed EIA as represented by Figure 1 [9], [16], [18]. The EIA process starts with identifying the proposed development as a prescribed activity or not in accordance to the list of prescribed activities given in the EIA Handbook [16], [18].

If the proposed project is classified as a prescribed activity, the next mandatory step to be taken is the Preliminary Site Assessment stage [2], [19]. The Preliminary Site Assessment or known as 'Penilaian Awal Tapak' (PAT) is a mandatory step to be taken by the EIA consultants prior to the preparation of Preliminary EIA or the Term of Reference (TOR) for Detailed EIA [19]. The PAT stage is crucial to ensure that the proposed site for the EIA project are being assessed before the submission of the EIA report to the DOE [19]. In addition, this PAT process aids the project proponent in selecting the best possible site for the proposed project. Once the PAT has been submitted, the proposed project will be decided by the DOE to pursue an EIA report of either Preliminary EIA or Detailed EIA or to be ceased (Figure 1).

In Preliminary EIA, potential environmental threats in the proposed development are analysed, suitable project options and proper mitigation measures are determined to reduce significant impact towards the environment [9]. For Preliminary EIA, the time taken for the review of a Preliminary EIA report consists of either three (3) weeks or five (5) weeks in accordance to the type of prescribed activity [11], [18]. On the contrary, a Detailed EIA is undertaken by projects which indicated significant residual environmental impacts to the

environment [18]. The Detailed EIA must be prepared in accordance with the Terms of Reference (TOR) and both the TOR and the Detailed EIA report are to be submitted to the DOE for approval and review for twelve (12) weeks [16]. Figure 1 illustrates flowchart of the EIA process that is administered in Malaysia.

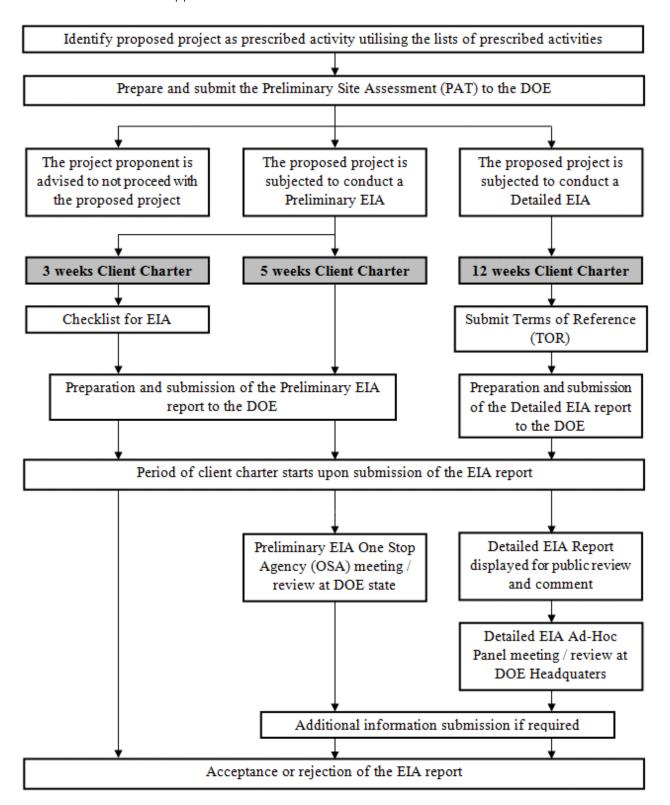


Figure 1 The Flowchart of the Malaysian EIA Process

2.0 METHODOLOGY

Application of qualitative research instrument has been adapted for the data collection stage. In-depth semi-structured interview has been chosen to be the qualitative instrument in the process of data collection. According to Thomas et al. [20], interview can be categorised as one of the renown and most frequently applied instrument for a qualitative data collection. Moreover, utilising interview as the research instrument in data collection helps to gain extensive knowledge on the particular research area [21]. Utilising interview as the research method also helps in verifying facts in regards to the research area by retrieving opinions, thoughts and knowledge from the respondents [21].

Invitations for the semi-structured interviews were sent via email to a group of 300 registered EIA consultants in Selangor. For this research, 25 EIA consultants that are registered with the Department of Environment (DOE) Malaysia were interviewed. Interview sessions were conducted from 3 September until 4 October in 2013. The data collected were analysed and are discussed in the results and discussion section.

3.0 RESULTS AND DISCUSSIONS

In the data collection stage, 25 respondents were inquired to explain on three subtopics in relation to the preparation and submission process of EIA in Malaysia. The three (3) subtopics are the policies and guidelines on EIA in Malaysia, the current EIA process in Malaysia, the Preliminary EIA and the Detailed EIA.

3.1 Policies and Guidelines on EIA in Malaysia

The Handbook Environmental Impact Assessment Guidelines is only one of the many guidance documents that were published by the Department of the Environment (DOE). The Malaysian government has drafted and published multiple policies on the environmental protection and sustainable development and these policies evolved through time in accordance to the current development in Malaysia. Thus, this research analyses the policies and guidelines that are employed as the tools to further implement EIA in Malaysia. From the interview, few respondents have agreed that the policies and guidelines on EIA in Malaysia is relatively good and efficient while others have regarded that there are issues to be focused on and further improvement should be carried out to improve the effectiveness of the policies and guidelines.

Nine (9) respondents gave positive comments on the current guidelines and policies that are applied in the EIA field. Most of them have mentioned that the guidelines given are quite clear and it is indeed effective. Two (2) respondents have complimented the DOE for being the best department that they have worked with. "For me, I think the guidelines are very effective. Whatever that is stated in the guideline are what they call as operational, a result from the opinions of professionals. A group of professionals have drafted the guidelines..." (EC02)

"Effective because we know the scope, for our write up. So, the write up would not be deviated from the actual purpose, meaning we know the scope that DOE requires and the intention for it..." (EC05)

"Effective because the guidelines are quite detailed, they would sometimes give examples for certain criteria in the guideline. So, to me, I think it is effective." (EC07)

"Well, the guidelines are pretty good. They were prepared by other environmental consultants who have done a very, very good job for other consultants to follow..." (EC09)

"There are several guidelines published for specific development such as housing development. So, they have prepared the guideline and we know what DOE wants..." (EC10)

"I think it is ok, should be effective enough. In other words, it is clear." (EC21)

"The guidelines are good, they are quite effective..." (EC22)

"I think they are very good. Yes, I think among all the departments that we have worked with, DOE is the best. The people are more committed and competent." (EC24)

"Yes, they are very good. Very good. This is because the guidelines are very clear, they tell you what exactly that they want. DOE is the best department we've worked with. The people in DOE are committed and competent." (EC25)

In addition, ten (10) more respondents have given their sentiment on the topic of discussion. Most of them do agree that the guidelines and policies are fine but further improvements are needed to increase the effectiveness of the EIA tools. Some of the respondents regarded that there are loopholes in the guidelines and policies that are getting abused by the project proponents. Many of them also stated that the level of awareness of project proponents is relatively low and the enforcement from the authority especially the DOE have contributed to the ill implementation of the tools in EIA.

"...the issue that we are experiencing here in Malaysia is the monitoring from the DOE. Sometimes, the report does follow all the guidelines given but the implementation on site is not as presented in the report. If the site is far within a rural area, the DOE do not have the capacity to supply the officers to monitor the site. At times, the monitoring will only be done when there is a complaint or an issue that has caught the attention of press. So, the issue is the regular monitoring by the DOE officers..." (ECO2)

"We have quite a number of guidelines and policies but somehow the enforcement of these guidelines and policies are very weak. In the report submitted, every detail is as stated by the guideline but when it comes to the implementation on site, none of the items that are reported in the report is place on site. Sometimes, the developer is willing to pay for the fines because they are reluctant to do as stated in the EIA report. This definitely shows the weak enforcement by the DOE and the authority. So, the policy and guidelines are there, it is just the matter of enforcing them." (EC03)

"Well, certain guidelines that they have provided are okay but some needs to be updated. In my opinion, the input of the guidelines is to be updated to the current scenario. For the policies, well, they keep on changing the policies now and then, and I presume it is for the betterment of the EIA process. So, I think it is fine but do need some fine tuning a bit more." (EC08)

"...but, the question is, are they really following it? Are there any guidelines for every aspect? There are guidelines for a lot of prominent industries but there may not be guidelines for everything. It is difficult also to prepare guidelines for everything. So, there are good guidelines, but having said that, even that is being improved as we speak." (EC09)

"...In terms of EIA per say, specifically for the section on EIA, there are few loopholes here and there. Having said that, the project proponents utilised these loopholes to escape from conducting EIA. Then again, as a consultant, we have ethics and responsibility to educate the project proponents... In terms of awareness, DOE has provided training and improved the contents on their website. This have assist DOE in educating the NGOs and also the public." (EC11)

"Judging from the project itself, if the guidelines are followed in the beginning stage of the project then it is effective. However, the practices here in Malaysia seldom follow the guidelines or policies given. The EIA normally comes late in the stages of the project, whereby, the project has started almost halfway, then the EIA comes in... In a way, I think the lack of awareness present in the group of developers. The guidelines and policies are ok but it is definitely less effective since the lack of awareness from the developers and also the lack of enforcement by the authorities." (EC13)

"The law is there, but the problem is the enforcement. Many developers tend to bend the law to get away with multiple things. Conclusively, the effectiveness is depending on the enforcement." (EC14)

"The guidelines, I can say that it's very confusing. Each sector has its own guidelines. Sometimes, it overlaps with each other, the principles are the same, but the guidelines are very confusing. The policies that we have, we have a lot of policies. We have beautiful policies but then the execution is weak. I am not sure that whether we don't have the political will or simply lack of people to execute the policies. I think we have it all covered, but the issue is the execution..." (EC17)

"The guidelines are there but it is mostly subjected to the nature of the project, and sometimes it also depends on the DOE officers. Sometimes, they may ask for something that is not required under the guidelines so, it is not very clear cut, sometimes is subjected to discussion..." (EC18)

"I think the guidelines are not effective, I mean they are intact just that the guidelines are not that effective. Yes, the consultants are aware but are the developers aware of the guidelines? It is indeed the responsibilities of the consultants to tell the developers on the guidelines and policies on EIA but somehow it is not working. Hearing from a consultant and hearing from an authority gives different impact and I think the issue is the authorities need to further improve their role to educate the developers on existing guidelines and policies..." (EC23)

Nonetheless, two (2) of the respondents have given different opinions on the level of effectiveness of the guidelines and policies on EIA in Malaysia. Both of the respondents regarded that the effective implementation is seen at the departmental level but the lack of implementation is definitely obvious at a higher level. One (1) respondent (Respondent EC06)

also added that the guidelines provided for EIA is already more than enough and the issues arise mostly on the policies that are being implemented.

"I think strict regulation is being implemented at the level of DOE but not at a higher level, meaning the ministry level. I do not say that it is not effective at all, but there are surely some loopholes here and there that need improvements. We should probably come up with more proper policies and guidelines, perhaps?" (EC04)

"Of course DOE has produced many guidelines, the general guideline and also the sector specific guidelines. I think there are 20 over guidelines provided by DOE which covers multiple developments such as housing, industries, highway, power stations, sewage, water supply and etc. As far as guidelines are concerned, I think we have enough guidelines. Sometimes, the issue arises because of the policies, if the policy is not right, we would have problems at the project level. Let me give you an example, our national policy which is the Dasar Tenaga National promotes the use of coal. In Malaysia, we rely on 5 fuels that are coal, hydro, oil, gas and renewable energy. The national policy is at the highest level which promotes the usage of coal and a developer wants to build a coal fire power station. When the EIA is conducted on the project at the project level, it will usually get into a lot of problems. There will be an opposition and protests by the public and NGOs to stop the project. So, the guidelines are fine, the issue here is with the policies. We definitely need to review the policies. Normally the issue with the policies is we does not realise the problem until we come to the project level. The EIA is conducted at the project level, not the policy level. So, if you asked me, I would say the guidelines are fine, only the policies that need to be improved." (EC06)

Table 1 summarises the respondents' responses in regards to the current policies and guidelines on the EIA process in Malaysia.

Table 1 Policies and Guidelines on EIA Process

Policies and Guidelines on EIA Process	Frequency	Percentage (%)
The guidelines and policies are fine but further improvements are needed to increase the effectiveness of the EIA tools, level of awareness of project proponents is relatively low and the enforcement from the authority especially the DOE have contributed to the ill implementation of the tools in EIA	10	47.6
The policies and guidelines on EIA in Malaysia is relatively good but there are issues to be focused on and further improvement should be taken to improve the effectiveness of the policies and guidelines	9	42.9
The effective implementation at the departmental level but the lack of implementation at the policy level	2	9.5
TOTAL	21	100

3.2 Current EIA Process in Malaysia

The respondents were inquired on their professional opinions on the current EIA process that is being implemented in Malaysia. This is essential to evaluate the progress of the current EIA practice that being implemented in the industry. Generally, most of the respondents have given positive insights on the overall EIA process that has been implemented in Malaysia. 20 respondents have agreed that the overall process of preparation and submission of EIA in Malaysia is quite good in comparison with the previous years of implementation and it is definitely improving from time to time.

"So far I think, I would say it is quite good. A lot has improved now." (EC01)

"My professional opinion, I would say it's ok." (EC02)

"...now, they make it compulsory for the consultants to be registered with the DOE. So, to me now the process is ok." (EC04)

"I think the EIA process has improved and if anything, we can just refer directly to the DOE's officers." (EC05)

"From my professional opinion, I may say that it is ok and it is improving..." (EC10)

"I think that the procedure has improved as with the new registration whereby only qualified & competent consultant is qualified to produce the EIA. Even with DOE, the procedure of submission to DOE has improved with the ISO procedure where PEIA only takes 5 weeks and DEIA takes around 3 months to be approved..." (EC11)

"I think the EIA process is well spelled out... generally it is fine." (EC12)

"In Malaysia, the process and procedure is clear..." (EC13)

"...I think it is getting better because previously anyone gets to prepare the EIA report. Now with the registration scheme, it's getting better..." (EC17)

"It is a well-established process... It's very clear cut." (EC18)

"I think the EIA process has improved since the registration of the consultants" (EC21)

"Originally, the EIA report is prepared by whomever and sometimes not all environmental issues are addressed... the process has gone through a lot of improvement since then... So, I would say its better now, it is more streamlined." (EC22)

Additionally, eight (8) respondents have given further explanations to their answers. Overall, all eight (8) respondents have collectively agreed that the EIA process has indeed improved significantly compared to previous years. The respondents complimented the EIA system set by the DOE that are more systematic and increase in terms of standard. Furthermore, the eight (8) respondents elaborated on the changes seen that are proper regulations have been set up, proper licensing system issued to the consultants (consultant's registration scheme) and more systematic approach in

the EIA process by adding relevant stages such as the Preliminary Site Assessment (PAT) and the One Stop Agency (OSA) meeting. One of the respondents (Respondent EC09) regarded that these changes have mould the DOE officer to be more stringent, educated and trained and trains the consultants to be more aware, thorough and precise in producing high quality EIAs.

"In my opinion the process is better now compared to before. DOE is constantly improving. For example, I started in EIA since 1996. In 2003, they have given out certificates to consultants that have conducted an EIA but it means nothing, more of an accessory. Then, they introduced the registration scheme in 2007, each consultant will have to attend induction courses and pass the examination and there are criteria to register under the scheme. So, everything is there, you just need to follow." (EC03)

"...My first experience in EIA was in 1988. I think there are improvements in terms of quality of EIA report since 25 years ago... Now, the standard has increased and expectations of public have gone up... In a nutshell, the quality of EIA has improved because the public expectation has increased concurrently." (EC06)

"Well, previously there was no proper regulation when I first joined in this field in 2004. Now, they've come up with registrations of consultants, expiry dates on the licences which are good but further improvements still need to be made..." (EC08)

"There are a lot of changes happening. Consultants are becoming more aware that they need to be thorough and precise and DOE has become more stringent, more educated and more trained... So, it is safe to say that it is improving." (EC09)

"In my opinion, it is more systematic now and EIA is being carried out by qualified professionals... First, there is the list of prescribed activities for EIA, so, it is very clear. Secondly, the submission of the PAT (Penilaian Awal Tapak) which helps the DOE to decide which EIA does the project belongs to and thirdly is the registration scheme. The quality control is there. Then, the OSA (One Stop Agency) where all of government agencies inclusive of DOE will make an evaluation on the EIA submitted. So, overall the process is systematic and professionally carried out." (EC14)

"For me, it has improved. We first start off with the PAT then the OSA meeting. Only certain EIA will go through the OSA meeting. So, I think overall, it has improved." (EC15)

"Since the DOE has been certified with ISO 9000, their client charter has helped to speed up the approval process which is best for client and also the consultants. Moreover, the introduction of PAT has made it much easier as the PAT helps to screen the project on the site suitability issues. So, it is definitely improving now." (EC16)

"Ok, from what I can see now, DOE has established a good system. They have come up their own internal checklist, their own internal standards of how and what should be processed. So, they have actually established a good system of how to process a good EIA report. It is more systematic now..." (EC18)

Even so, five (5) other respondents have given mixed opinions on this matter. All five (5) respondents have made few comments on the current EIA process on its loopholes and ill practices. Two (2) respondents (Respondent EC19 & EC20) have commented on the new client charter that has been done by the DOE while one (1) respondent (Respondent EC23) mentioned on the issue of commitment from the

developer. As for the other two (2) respondents (Respondent EC24 & EC25), they discussed on the issue of EIA in Malaysia being too demanding and more complicated for a sole report.

"The overall process of EIA is quite ok but I would like to emphasize on the 3 weeks EIA. It is convenient for the Client to get the approval in 3 weeks but it is quite a hassle for the consultants to get all the things needed in the checklist especially the approval letter from related agencies. This is because the agencies tend to ask for more studies that are irrelevant to the EIA study in order to issue the letter..." (EC19)

"Actually the procedure is good....it's just that in my opinion, the 3 weeks EIA is not very feasible as the consultants cannot control the time meaning the time for the feedback from the agencies as the agencies tend to release the approval letter at their own time. As for the 5 weeks and 3 months EIA, it is more reasonable as we can coordinate our time and commit to the client to speed up the pace. Further, the some of the agencies tend to not release the approval letter at all as they insist that the approval letter will only be released after the OSA meeting whereby for the 3 weeks EIA does not have any OSA meeting. And another thing, the DOE officers are mostly generalists where they are not experts in certain areas. It has been difficult for them to understand the EIA report as the key chapters are mostly technical. The procedure is good but when things like this that makes it not so good..." (EC20)

"The preparation of EIA does not get a proper commitment from the project developer, as they feel that it is just another document to be approved...they do not see the importance of EIA and because of that, it is difficult to get information from them. They do not see the relevance of sharing information with the consultants or DOE which then will lead to insufficient information for the EIA report..." (EC23)

"It is getting too complicated, more demanding but more structured now. It is more structured but it requires the EIA report to be a lot more comprehensive and until a point that sometimes irrelevant. Now, the report has to have everything and comes up to be a few volumes of report which they themselves do not have time to analyse volumes of EIA reports...So, that's my view, it is getting too demanding." (EC24)

"The EIA process is now getting too complicated whereby more criteria to be fulfilled in order to produce one single report. Nevertheless, it is more structured than before. Sometimes, the items that they require are not needed at the level of impact assessment, perhaps after the project starts. So, these are the issues to be resolved..." (EC25)

Table 2 summarises the opinions from the respondents in regards to the current EIA process that is currently being implemented in Malaysia.

Table 2 Current EIA Process in Malaysia

Current EIA Process in Malaysia	Frequency	Percentage (%)
The overall process of preparation and submission of EIA in Malaysia is quite good and improving from time to time	20	80.0
Issues on the three weeks client charter, commitments from the developer, the process getting too complicated for a sole report	5	20.0
TOTAL	25	100

3.3 Preliminary Environmental Impact Assessment (PEIA) and Detailed Environmental Impact Assessment (DEIA)

Few authors have regarded the Preliminary EIA and the Detailed EIA constitute a continuous process of an EIA report preparation for new developments in Malaysia which contradicts with the current EIA process that is being applied in Malaysia [9], [22]-[24]. Hence, the respondents were required to give their opinions on the statement and to elaborate on the current EIA process that is implemented locally. According to three (3) respondents, the description of the EIA process was given as a continuous process whereby the Preliminary EIA was conducted to screen the residual impact of the project. When the project has a significant residual impact, a Detailed EIA will be conducted.

"...Before proceeding to the Detailed EIA, we would have to conduct a Preliminary EIA where the impacts and mitigation measures will be identified. From the PEIA, if any of the impacts is screened to be a significant residual impact, a Detailed EIA will be conducted..." (EC01)

"I agree. Before preparing the Detailed EIA, Preliminary EIA is conducted to see the depth of the environmental impacts that will be produced..." (EC04)

"It is very important to do a proper background study that will be conducted in PEIA to flag any issues before proceeding to DEIA. So, yes, I do agree..." (EC12)

Nevertheless, five (5) respondents commented on the statement of a continuous EIA process and indicated that it was made based on the practice of EIA in previous years. These respondents have clarified that the practice of continuous process from Preliminary EIA to Detailed EIA was practiced before they have upgraded the EIA system in Malaysia.

"I think Detailed EIA is different from Preliminary EIA. When you receive a project, you will analyse either the project falls under Preliminary EIA or Detailed EIA... But this does happened few years ago but now, it is quite clear what goes for Preliminary EIA and Detailed EIA." (EC08)

"...For a project that falls under the prescribed list, an EIA report is done accordingly. From my experiences, there are projects that I have been involved which requires a continuation in a Detailed EIA..." (EC13)

"...Now, with the PAT, the DOE officers will inform us which EIA report to be prepared for the project. So, I don't agree with the statement. Before PAT was established, yes, I have encountered such situations..." (EC15)

"In the early days, yes, we do it as a continuous process. Now, lists of prescribed activities for both reports are in place so, it is very clear which report to be prepared." (EC21)

"...I have no experience in conducting both EIA reports for a sole project. Preparing both reports for a project is a redundant process. Maybe in those days, these cases happen often, but now with the new requirement, it is not possible..." (EC23)

One (1) respondent (Respondent EC20) has stated that the continuous process is not applied in Malaysia. Respondent EC20 shared the experience of working to prepare an EIA in Bangladesh where it is a continuous process from Preliminary EIA to Detailed EIA. Nonetheless, Respondent EC20 indicated that a full Detailed EIA is not required to be prepared for the project. Detailed EIA will only be conducted on few issues in the project that requires thorough assessments.

"In my experience of preparing EIA in Bangladesh, it was a continuous process. In the PEIA stage, the issues were declared and an assessment is made. If there is any issues that requires a more thorough assessment, DEIA will be administered on that particular issue only. Different case for Malaysia where it is a separate process..." (EC20)

Three (3) respondents have pointed out that the continuous process was carried out based on a few cases. However, the process is not entirely continuous as the Preliminary EIA was discarded in order to conduct a Detailed EIA because of the sensitivity issues that was found in the project.

"...This does not happen in Malaysia. The current practice is we use the lists of prescribed activities of PEIA and DEIA to determine the type of report to be prepared... But there were cases whereby a PEIA was submitted and when it was reviewed, DOE said that the project falls under the DEIA report. So, the PEIA report was dismissed and a new study was conducted under the DEIA report. This is one of the reasons why DOE established the PAT in the first place. The PAT makes it easier and clearer to the proponent to conduct either PEIA or DEIA." (EC03)

"No, one does not lead to another. It's not a standard feature, if a project is listed under the Detailed EIA, no Preliminary EIA is required. However, as an example, a project started with a Preliminary EIA, then we notice the sensitivity of the project, a direct shift was made to the Detailed EIA. This does not happen often and more of a case-to-case basis. It is not a standard thing." (EC24)

"No, it is very clear by the guideline provided which activities fall under Preliminary EIA and which activities fall under Detailed EIA. Nonetheless, it does happen on a case basis whereby a project has started off with PEIA. Then, the scope of work was screened and DOE decided that we should move to DEIA. I had that experience." (EC25)

In the current EIA practice, the Preliminary EIA and the Detailed EIA are known as two separate processes in EIA. Referring to the responses from six (6) respondents, they have disagreed on the statement that Preliminary EIA and Detailed EIA are a continuous process. The six (6) respondents stated that the Preliminary EIA and Detailed EIA are two distinctly separate processes. Additionally, the respondents added that the DOE has established two lists of prescribed activities for the Preliminary EIA and the Detailed EIA respectively. Thus, the determination of which EIA reports to be prepared for a proposed development is done according to the prescribed activities list.

"According to the DOE's guidelines, Preliminary EIA has certain land size while Detailed EIA normally for massive developments. So far I have never experienced a continuous process from a Preliminary EIA to a Detailed EIA..." (EC02)

"I don't agree with the statement because the project that falls under PEIA requires a PEIA report and the activities that falls under DEIA, will require a DEIA report..." (EC05)

"There are lists of prescribed activities for both Preliminary and Detailed EIAs. There are cases whereby it is listed under the Preliminary EIA but DOE realised that it is situated at a sensitive area so a Detailed EIA is instructed to be done..." (EC07)

"I do not agree with the statement. This situation will affect the cost and time for the project. If we are to go through the Preliminary EIA then the Detailed EIA, it will take about six months to a year to finish one EIA report. Therefore, an increase cost for the preparation of two EIA reports. In other words, you are doing twice the work of a same purpose. DOE has published the list for each EIA report and it easier to refer to the list instead of wasting the time and money to prepare two reports." (EC14)

"No, you either do Preliminary EIA or Detailed EIA, not both..." (EC18)

"No, I disagree as both are two separate processes." (EC19)

Three (3) respondents have indicated that both Preliminary EIA and Detailed EIA are similar reports and undergo similar processes of submission of EIA. The differences between the two reports are the depth of information provided, the public participation element, review process, time taken to prepare the reports and the preparation of Terms of Reference (TOR) which is only required for the Detailed EIA.

"...Actually, as far as the report is concern, there should not be any difference. The only difference is the public participation element and the review process. So, at the moment, for DEIA, there is the TOR (terms of reference) in the beginning. So, before you proceed with the EIA, you will have to submit the TOR then proceed with the preparation of the EIA report. The DEIA report must be advertised for public comments. Those are the differences. For PEIA, the report is still the same and the DOE will review the report..." (EC06)

"If you look at the way DOE's definition for the PEIA and DEIA reports, it does not have much difference between both reports. The content of both PEIA and DEIA reports are the same. The depth of the information is the difference as DEIA report involves a wider scope of public participation and a Term of Reference (TOR) need to be included..." (EC16)

"The reports are the same but the processes are different. The DEIA has more things to carry out including public review and prepare both TOR and EIA. The PEIA is only reviewed by government agencies while the DEIA is reviewed by both government agencies and a panel of experts. If a project falls under the list of DEIA, a DEIA report will be prepared without conducting the PEIA report." (EC22)

In addition, four (4) of the respondents have added that DOE has included an additional step before the preparation of either Preliminary EIA or the Detailed EIA for a proposed development. The Preliminary Site Assessment or more known as the 'Penilaian Awal Tapak' (PAT) is an additional step whereby the

proponents are required to submit the PAT form before conducting the EIA reports [19]. From the PAT submitted, the DOE will analyse and decide on which EIA report is required for the purposed development. Thus, redundant practice of conducting the Preliminary EIA followed by the Detailed EIA is no longer possible.

"...When you say a project requires an EIA, it can be either Preliminary EIA or Detailed EIA. Both are the same, both go through the entire process of getting an approval from DOE. Preliminary EIA takes up a process of 6 months & Detailed EIA takes up a process of a year. For Detailed EIA, the report will be displayed for public comments... Now, you need to do a site assessment that we call as the PAT. From there, the DOE will decide whether you proceed with Preliminary EIA or Detailed EIA..." (EC09)

"...DOE has come out with a list of prescribed activities that for both PEIA and DEIA. If a project that requires PEIA has found to have significant residual impact and is situated at a sensitive area, a DEIA will be carried out to replace the PEIA. Normally, this kind of cases is very uncommon and since DOE has introduced the PAT, it makes it easier as the DOE has decide that whether the project have to conduct a PEIA or a DEIA straight away..." (EC10)

"I think the statement is inaccurate, both are two different procedures because only certain projects are listed to be entitled to Detailed EIA submission... Usually, once we received initial information from the project proponent, we consult the DOE officers to determine which report does the project entitled to. This is crucial because different EIA reports require different costing; different set of monitoring, different baseline and it also involves significant differences on the public participation required." (EC11)

"I don't think I agree as in Malaysia, a Preliminary EIA has no TOR while the Detailed EIA needs TOR. Sometimes, the Preliminary EIA can be qualitative and the Detailed EIA can be quantitative... Now, there is the PAT that is a more structured way to determine a Preliminary EIA or a Detailed EIA for a project..." (EC17)

Table 3 summarises the respondents' explanations regarding to Preliminary EIA and Detailed EIA that are implemented in Malaysia.

Table 3 Preliminary EIA and Detailed EIA

Preliminary EIA and Detailed EIA	Frequency	Percentage (%)
The Preliminary EIA and the Detailed EIA are known as two separate processes in EIA. DOE has established two lists of prescribed activities for the Preliminary EIA and the Detailed EIA	6	24.0
The practice of continuous process from Preliminary EIA to Detailed EIA was practiced before the EIA system was upgraded	5	20.0

Preliminary EIA and Detailed EIA	Frequency	Percentage (%)
An additional step before conducting the EIA reports known as the Preliminary Site Assessment or the 'Penilaian Awal Tapak' (PAT). Thus, redundant practice of conducting the Preliminary EIA followed by the Detailed EIA is no longer possible	4	16.0
Preliminary EIA and Detailed EIA are similar reports which comprise of few differences that are depth of information, public participation element, review process, duration of report preparation and the Terms of Reference (TOR).	3	12.0
The continuous process was carried out based on a few cases. However, the process is not entirely continuous as the Preliminary EIA was discarded in order to conduct a Detailed EIA because of the sensitivity issues that was found in the project	3	12.0
EIA process was given as a continuous process whereby the Preliminary EIA was conducted to screen the residual impact of the project. When the project has a significant residual impact, a Detailed EIA will be conducted	3	12.0
EIA process conducted in Bangladesh is a continuous process if any issues found in the project that requires further assessment. In contrast to Malaysia where it is not a continuous process	1	4.0
TOTAL	25	100

4.0 CONCLUSION

From the qualitative data collection, it can be concluded that the Environmental Impact Assessment in Malaysia is in need of improvement to ensure the effectiveness of the EIA application in Malaysia. The tools for the implementation of the EIA in Malaysia which refers to the policies and guidelines although adequate, are in need for improvements to induce a better implementation of EIA. Moreover, the overall process of EIA in Malaysia has significantly improved in comparison with previous years. The DOE has established two types of EIA reports in order to ensure a more systematic implementation of EIA in Malaysia. Conclusively, the EIA in Malaysia is improving from time to time and this will ensure a better implementation of EIA in Malaysia.

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