Simon HO (***Environmental Protection Officer)*** Environmental Protection Department, Hong Kong SAR

Email: simonho@epd.gov.hk

Josh FOTHERGILL (Senior Advisor) Institute of Environmental Management & Assessment, United Kingdom

Email: j.fothergill@iema.net

Henry LEUNG *(Chairman)* Hong Kong Institute of Environmental Impact Assessment

Email: hhyleung@mtr.com.hk

Andy CHUNG (CEO) XNT Limited

Email: awlchung@xntlimited.com

A COMPARISON OF EIA QUALITY PRACTICE IN HONG KONG AND THE UNITED KINGDOM

1. ABSTRACT

Environmental Impact Assessment (EIA) has been practiced in many countries for the past decades and has the important role of ensuring environmental concerns of new development are properly addressed and fully integrated into the decision making process.

The EIA Ordinance (EIAO) of Hong Kong (HK) was enacted in 1997 for this purpose. In April 2011, the Institute of Environmental Management & Assessment (IEMA) in the United Kingdom (UK) launched the EIA Quality Mark, establishing a new standard for organisations for conducting EIAs in the UK. The scheme allows consultancies and developers, who lead EIA studies, to make a voluntary commitment to undertaking quality practice and producing effective Environmental Statements.

This paper will discuss and compare the functions of EIA systems in the United Kingdom and Hong Kong and examine their overall EIA process, including the involvement of the key stakeholders, responsibilities of the project proponent, professional bodies and how the public is being engaged within the EIA process. This paper will also discuss whether the existing EIA systems in UK and HK could be enhanced to meet the increasing expectation of quality practice.

2. OVERVIEW OF EIA LEGAL SYSTEMS

2.1 United Kingdom – The UK's EIA system is based on the Pan-European EIA Directive. The original Directive (85/337/EEC) was amended three times, 1997, 2003 and 2009, before being formally consolidated into Directive 2011/92/EU. The UK transposed the European requirements into a range of existing consent regimes, and, when combined with the UK devolution process, this means a project might be subject to an EIA from one of >20 different sets of Regulations.

Despite this apparent complexity, the approach to EIA across the regulations is broadly similar to the Pan-European EIA Directive. The first step is screening, which determines the need for EIA and is split into lists of project types:

- Schedule 1: development projects that always require an EIA (e.g. nuclear reactors)
- Schedule 2: projects that could require EIA, dependent on a case by case examination (e.g. urban projects).

The main EIA regulations, relating to planning consent, only require case by case examination if a proposal is above a specific threshold, e.g. >0.5ha.

Where an EIA is required, developers can voluntarily seek assistance in scoping the assessment. However, the first time the public are legally required to be engaged in the EIA process is where an application and an Environmental Statement (ES) are submitted. The consenting authority determines if the ES is complete; where it is not, consent is delayed until further information is submitted. ES is a decision support tool and must be considered in decision-making, but a compliant ES cannot, itself, stop consent being granted. Neither the EIA Directive nor UK regulations require post-consent environmental monitoring.

2.2 **Hong Kong –** HK's EIA System evolved from an administrative EIA system for major development projects, and is a system that dated back to the mid '80s. The EIAO in HK was enacted in January 1997 to provide the legal EIA framework for HK. Under the EIAO, proposed activities that are likely to have adverse impacts on the environmental are known as *designated projects*. These designated projects are classified into two categories: Schedule 2 and Schedule 3. Designated projects specified under Schedule 2 of the Ordinance (roads, railway, decommissioning of an oil refinery, etc)

must follow the statutory EIA process and require environmental permits[1] for their construction and operation (and decommission if applicable); while those specified under Schedule 3 of the Ordinance (engineering feasibility studies of urban development project with a study area covering more than 20 hectares or involving a population of more than 100 000 residents) are required to submit EIA reports for approval, but will not require environmental permits.

In HK, the Environmental Protection Department (EPD) is the designated agency to enforce the EIAO. It is also specified in the Ordinance that the Director of the EPD (DEP) shall take advice from other relevant authorities on certain matters, e.g., advice from the Director of the Agricultural, Fisheries and Conservation Department on nature conservation and ecological assessment; advice from the Commissioner of Transport from the Transport Department on traffic and transport matters, etc. The EPD also assumes the role of managing the EIA process, which is carried out mainly in two stages: the scoping stage and the review stage. During the scoping stage, the EPD will decide the scope of the EIA report by issuing EIA Study Briefs. During the review stage, the EPD will review and make decisions on whether to approve the EIA reports prepared by the Project Proponents and their consultants.

One of the key features of the EIA system in HK is the issuance of environmental permits to ascertain that the recommendations of the Project Profiles and EIA reports will be implemented during the construction and operational (and decommissioning, if applicable) stages of the projects. The DEP will consider factors, including the mitigation measures set out in Project Profiles and EIA reports, conditions of approval of EIA reports, advice given by other relevant authorities, etc, in determining the conditions of the environmental permits. Quite often, the conditions will also include requirements for environmental monitoring audits provisions, and, requirements for professional independent checkers.

3. PUBLIC ENGAGEMENT PROCESS

3.1 United Kingdom – Public engagement is a key component in the UK EIA, but this role has little to do with legal compliance. As indicated earlier in this paper, the first formal requirement to involve the public in most UK EIAs is during the consultation on the Environmental Statement (ES), when the assessment is complete! This is partly because the European EIA Directive lacks clarity and only requires engagement at this late stage, but also states, in Article 6(4), that the public should have an "*early and effective*" opportunity to engage.

The legislation allows the public to access screening decisions, which indicate whether a project requires EIA; this is via online registers, maintained by >350 consenting authorities. If the public wishes to challenge a decision, mechanisms exist to do this via the central Government, or, the Courts.

Despite a rather limited regulatory basis, early public involvement in UK EIA practice is in fact common during scoping. The vast majority of UK EIAs will undertake the voluntary scoping stage, discussed above, which involves the decision-making body and statutory environmental bodies. Alongside this consultation process, it is common practice to also engage the public.

This engagement often involves a number of the following: consultation on a scoping report; information provision and feedback via leaflets that direct people to a project website; and, direct engagement via exhibitions, often held in well used local public facilities, e.g. supermarkets and public meetings. Access is rarely restricted, and, as such, NGOs, community groups and individual citizens all have the opportunity to input concerns and engage in the EIA process.

3.2 Hong Kong – Under the EIAO, the public is given an opportunity to contribute to the scope of the EIA study for a designated project during the scoping stage of the EIA process, as well as a chance to comment on the findings of the EIA study during the review stage of the EIA process. The law also formalizes past arrangements for consultation with the Administration's appointed Advisory Council on the Environment (ACE), which comprises members of environmental advocacy groups, and experts and scholars in the field of EIA. The EIAO requires the DEP to give due regards to comments from the public and the ACE in the issuance of the EIA Study Brief and in the EIA report approval process.

To enhance the public's access to information, apart from placing copies of the *Project Profiles*[2] in designated government locations, the EPD also utilises technological advances such as the internet systems. An EIAO webpage[3] has been set up

[1] An applicant may apply for an environmental permit to proceed with a Schedule 2 designated project if the Director of the Environmental Protection Department is satisfy that the findings of a previous approved EIA report of a similar activity are still valid, or, if the project is unlikely to cause significant environmental impact. The latter will also require the consent of the Secretary of Environment.

[2] Project description statement prepared by the Project Proponents during the scoping stage.

on which all decisions under the EIAO are posted. These include Project Profiles, approved EIA reports and environmental permits. In addition, the EIAO webpage also offers a platform for other emerging and innovative public engagement tools, such as three-dimensional (3D) EIAs and webcam at project sites.

Since the views and the support of the community are important for any designated project, in addition to the above statutory public engagement process through the EIAO platform for the public exhibition of the Project Profile and EIA Reports, roving exhibitions for the local communities including schools, residences, district councilors, etc, where the public can provide their comments, are sometimes arranged by the project proponents to strengthen the engagement process. Non-Government Organizations (NGOs) may also be engaged in this administrative EIA process, from as early as the preliminary project feasibility study[4] stage for some projects to evaluate project design options, ecological surveys and ecological protection design.

3.3 3D EIAs – The EPD in HK has introduced into the EIAO Process the concept of 3D EIA public engagement tools and has encouraged their adoption by proponents of large-scale projects since 2004. HK is the first place in the world to do so to enable better communication of EIA issues, make it easier for people to understand complex projects and issues, and thus, promote continuous public involvement and stakeholder engagement. It is also in line with the recent government policy to promote public dialogue on major development projects and involve them throughout project planning and implementation.

Apart from the 3D EIA public engagement tools, HK is among the first few places in the world to provide web-based information on environmental performance and EIA of major projects for access by the public. HK is the first and only place where the general public can have access to full EIA reports and comprehensive environmental monitoring and audit information through the Internet. The use of real-time web cameras for EIA follow-up is also a world first. Real-time cameras have been installed at selected major construction sites since April 2002, so that the general public, the project proponents, government departments and net surfers can monitor construction progress and compliance with the EIA Ordinance.

4. SOCIO-ECOLOGICAL CONSIDERATIONS

4.1 United Kingdom – UK practitioners would not be familiar with the term *socio-ecological consideration*; however, the concepts it aims to assess are increasingly addressed in UK practice. The EIA Directive requires practitioners to assess the inter-relationships between environmental topics, e.g. population, air, flora and fauna, that result from a project's predicted environmental effects. As such, the EIA of a waste-to-energy plant proposed with a few hundred metres of a protected habitat would often include air quality modelling to demonstrate that any pollutants emitted would be unlikely to be deposited on the protected site in sufficient concentrations to make the existing background levels increase to a level where significant adverse effects would occur.

In recent years, new concepts such as green infrastructure and ecosystem services have increasingly been discussed in relation to EIA. The former is more commonly understood and in essence considers how a proposed project could disrupt existing ecological networks, or through design alteration enhancing connections between currently disconnected habitats. Ecosystem services are not yet regularly integrated into UK EIA practice; however, the Institute of Environmental Management and Assessment (IEMA) has developed guidance to help practitioners to explore its application in a UK context.

4.2 Hong Kong – In HK, project proponents carefully select alternatives for any designated project in the early project planning stage. Through continuous environmental inputs to the process, such as value engineering workshops (non-statutory), significant environmental/ecological resources, e.g. Country Parks, conservation areas, wetlands, site of conservation importance, Ramsar sites, etc, these areas with high ecological value can be identified and impacts to these sites can be minimised at these early stages. Other factors studied include geographical and geological considerations, land resumption, site constraints, constructability, project operation flexibility, maintainability and disruption to the community are also crucial in the selection process, and, where necessary, in the ecological compensation proposal. These processes are well documented in the EIA Report, as such, the vetting authorities, public and other interested stakeholders are able to review each and every decision made in the process and raise their comments in the public engagement processes, as highlighted in the sessions above.

---

[3] http://www.epd.gov.hk/eia/

[4] A preliminary planning study under the Public Works Programme in Hong Kong.

5. EVALUATION OF EIA PRACTICES AND STRENGTHENING THE PROCESS

Both UK and HK has been working to strengthen the EIA quality practices through many different processes. This discussion examines whether the processes in UK and HK are comparable, and where they align can perhaps, set out an international good practice for adoption in UK, HK and elsewhere in the world.

5.1 EIA Report Review Process – In HK, the EIA Report is prepared based on the EIA Study Brief and various guidelines and technical memoranda established by the EPD. The reviewing and vetting processes are centralized and the responsibility of the EPD with support from various specialist departments within the Government; but the final approval of the multiple disciplinary EIA report rests with one single consenting body, the EPD. In the UK, the EIA Report is prepared based on the expertise's advices and the approval process is the responsibility of the relevant consenting authority (note there are >350 consenting authorities). Given the de-centralised nature of the authorising bodies, it is perhaps more difficult for each consenting authority to maintain in-depth technical capability on all environmental disciplines, hence may be more dependent on the consultant on maintaining quality of submitted reports. Therefore, it is perhaps more important that the EIA is led by accredited experts in the UK.

5.2 EIA Quality Practice

United Kingdom – The UK's EIA system is generally well regarded internationally. However, to maintain this position, the quality of UK practice must be constantly worked at. Until recently, any actions to do this were rather ad hoc, rather than being undertaken in a guided and structured manner.

In April 2011 that changed, with the launch of IEMA's *EIA Quality Mark*, a voluntary code of practice scheme for organisations that co-ordinate statutory EIAs in the UK. The scheme is based on seven commitments to quality practice, covering: how EIA is managed in an organisation; how effectively staff is trained; EIA regulatory compliance; and, how good practice is applied in scoping, assessment and presentation of results. The first six commitments are assessed on an annual basis by independent EIA experts, drawn from practice and academia, via: questionnaire, telephone interview and review of randomly selected recent ESs.

Whilst the first six commitments are important, they only focus on the quality of EIA within a registered organisation. The seventh is perhaps the most critical to improving quality across UK EIA practice, recognising as it does that the best solutions are often developed via a community of practitioners, outside the barriers between competitive consultancies. In less than 2 years, over 2 500 practitioners have attended >15 webinars, >20 workshops and been given access to a growing library of articles, thought pieces, case studies and an important live archive that contains over a third of all the ESs produced in the UK in the past three years.

Hong Kong – One of the key features in the HK EIA system is the role of the EPD as *process manager* of the system. As such, the EPD will, from time to time, review the EIA system in HK with a view to identifying areas that can be improved. There are some built-in Quality Assurance/Quality Control (QA/AC) mechanisms in the EIA Ordinance. For example, the EPD will issue a detailed EIA study brief to set out the scope of the EIA study and technical and reporting requirements. In addition, there is also adoption of a legal instrument called the Technical Memorandum on EIA Process, which is a technical guidance document covering all aspects of the HK EIA process, including the content of the Project Profile, the EIA Study Brief, EIA reports, issuing of environmental permits, etc. The EIA reports are required to meet both the requirements of the EIA Study Brief and the Technical Memorandum on EIA Process.

The transparency of the EIA system in HK has greatly enhanced the public involvement process since the enactment of the EIAO over the past 15 years. This, in turn, results in continuous increase in public demand for better EIA quality. Since the enactment of the EIAO, the EPD have seen several legal challenges on the EIA-approval process. The EPD has been drawing on its experience with past EIAs, public comments, and feedbacks from the judiciary in court cases, to critically review the EIA process. The outcomes of such reviews are disseminated to stakeholders through four EIAO Users Liaison Groups, with representatives from different sectors focusing on government departments and bureaus, consultants, private and public developers, and contractors. Recommendations from these reviews will be incorporated in new EIA study briefs and the EPD will also publish relevant guidance documents for this purpose.

5.3 Public Engagement Process

The public is demanding higher visibility and transparency of EIA information throughout different stages of project implementations including the scoping, preliminary design, detailed design, construction and operational stages of any

typical major infrastructure projects. Therefore, to assist the public and NGOs to better understand the EIA Report, layman terms and special tools are used to present the EIA findings to enhance the public engagement process.

Adoption of innovative tools, such as 3D EIA – With 3D public engagement tools, baseline environmental condition can be illustrated by digital 3D models with easy-to-understand visualisations. As different options and their environmental performance can be presented in 3D models through various coloured illustrations, graphics or multi-media images or videos, people can easily visualise and compare their advantages and disadvantages. Mitigation measures can also be visualised prior to their construction and implementation. People can appreciate the effects of such measures and after having a better understanding of a project, they can make use of the tools to offer suggestions, alternative options and mitigation measures.

Consensus can be developed through such information exchange, engagement and informed dialogue process offered by the tools. Such an interactive process not only increases the transparency of the EIA process, but also facilitates scenario testing and more efficient problem solving.

Role of Professional Institutes – Professional institutes also play an important role in the stakeholder engagement process throughout the different project implementation stages, in particular they can provide useful advice during early project planning stage.

In addition to the roles and responsibilities of IEMA, as highlighted above in the EIA process in the UK, in HK, professional institutes, such as the Hong Kong Institute of Environmental Impact Assessment (HKIEIA) also serve a role in providing expert EIA advice for the project proponents during the Strategic Environmental Assessment (SEA) and EIA stages at the public consultation platform for many projects. For example, in SEA exercise currently being undertaken by the Government for a new town development project in HK, the HKIEIA, which represents a good majority of the EIA practitioners in HK, provided views to the project proponent, aiming to promote the full consideration and integration of environmental implications at the early planning stage. This will help to avoid environmental problems and to identify environmentally-friendly options, rather than mitigating environmental impacts at a later stage, which are often neither effective nor cost-effective.

6. COHESION BETWEEN EIA, SOCIAL AND HEALTH IMPACT AND CLIMATE CHANGE

The European EIA Directive has its basis in environmental protection and hence direct expansion into a broader social and economic assessment tool is difficult. However, UK practice already covers many issues that have a heavy social slant to them, such as noise, visual impacts, health effects related to air quality and transport impacts, etc. Further to this, nearly two thirds of UK ESs in 2012 included a chapter that indicated they had assessed social-economic issues directly; however, such assessments are often limited to predicted jobs creation and the need for any additional education/health facilities and are poorly assessed in terms of the significance of effects predicted.

However, changes are already occurring in UK practice with IEMA having produced the world's first climate change and IA principles in 2010, as referred to in the IAIA's own principles of 2012. Further, in October 2012, the European Commission published proposals for revising the over-arching EIA Directive, which would see climate change, health, ecosystem services and disaster risk all brought into the regulatory expectations. If looked at optimistically, the expansion of UK EIA practice into a full ESIA approach could be less than five years away.

In HK, there are no assessment criteria/requirements against social impact, health impact and climate change assessment form under the EIA Ordinance. However, these issues are commonly brought up during the early planning stage by the stakeholders, where project proponents, in particular, in relation to major infrastructure projects, evaluate them to address the employment creation, economic benefit to the whole society. etc and base this on the best practices.

6. CONCLUSION –

This paper has described and compared the functions, operation of the EIA systems in the United Kingdom and Hong Kong and evaluated their overall EIA process, including the involvement of the key stakeholders, responsibilities of the project proponent and professional bodies as well as how the public are being engaged within the EIA process. Whether the existing EIA systems are strengthened enough to meet the increasing expectation on quality practice depends very much on how effective the review mechanism is in these places will be.