

An Introduction of South Korea's Environment Impact Assessment Support System (EIASS): Web-based EIA Information System

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Abstract

The EIASS is South Korea's advanced web-based EIA Information Support System that provides three main services: 1) A database of EIA report, 2) A service circulating EIA reports and notifying an ongoing EIA process, and 3) A GIS displaying and analyzing environmental and geographical information. So far, EIASS is evaluated as a success because of its contributions to facilitate the public participation and the information disclosure in EIA process and to enhance the integrity of EIA report. The public can access nearly the entire information and data in EIASS without limitations and review the past and current EIA reports free of charge. By providing the draft reports of the ongoing EIA projects in PDF format on the internet, the public participation and the feedback from local residents have become more active compared to the past. The significance of EIASS is that this system contributes to eliminate or minimize the information gap (asymmetry) among EIA stakeholders.

Main Paper

Environment Impact Assessment is becoming a very important administrative procedure that handles the social conflict associated with the environmental problems arising from development projects. Generally, EIA is the only opportunity for local residents to be informed and speak out about a development project and anticipated environmental problems, besides the developers or planners. So far, the process of EIA circulation provides very limited accessibility to the local residents because the hard copy of EIA draft report is used and the local residents are not well informed about the EIA circulation process and should visit the place where EIA draft is located in order to acquire information.

Besides the problems of EIA circulation, there are other problems of EIA process, for example, the poorly archived (almost discarded) information generated in EIA process and the limited consideration given to the previous EIA cases of nearby areas. EIA reports contain lots of valuable environment and geographical information, but these cannot be utilized well unless the data is digitalized.

In Korea, the EIA stakeholders including the government have recognized these problems almost 15 years ago and started to construct the internet web-based EIA Support System (EIASS: <http://eiass.go.kr/>). Additional functions and services are still being added to EIASS for an effective EIA procedure.

Korea's EIASS is consisted of three main parts;

1. The EIA database providing an accessibility to the archives of Korea's EIA reports (due to the limited accessibility and availability, only the EIA reports produced in the recent 20 year are archived),
2. System for circulating EIA report in electronic document format and providing service for real-time notification of an ongoing EIA project/plan,
3. Geographical Information System (GIS) providing environmental and geographical data and spatial analysis functions like slope calculation.

EIASS users can be classified into four different groups, 1) General users, 2) Developers or engineering companies of EIA projects, 3) Other government ministries and local governments besides the Ministry of Environment and related government agencies, and 4) The Ministry of Environment and its agencies. Depending on the user group level, access of some information is not granted to a certain group, for example, the expert's review comments on EIA project are not

accessible to the general user group. The strength of EIASS comes from the almost unlimited accessibility of EIA-related information to the general public, which is not limited to government officials.

As an EIA database system, EIASS provides the full contents of EIA report since 1982 in PDF image format. Due to the system and copyright issues, many EIA reports generated in the 1980s and the 1990s are missing and some EIA reports are not provided in EIASS due to the disapproval of the copyright owners. Therefore, users should bear in mind these limitations of EIASS as an EIA database. Nevertheless, EIASS is still a powerful EIA database where users can view past EIA reports and compare them to the current ones.

Next to the database function, one of the key functions of EIASS is that EIASS provides the PDF files of the on-going EIA reports and the final EIA consultation opinion of the Ministry of Environment to the general public as part of the Information Disclosure Act and the EIA circulation process. The general public and not just the EIA stakeholders like local residents or the developers can read all EIA reports and the final EIA consultation opinion of the Ministry of Environment. Such an information disclosure system promotes the openness of the government's administration process and facilitates public participation in EIA procedure such as feedback from local residents in a EIA circulation.

While the public or local residents may be interested in the information disclosure or accessibility of EIA, other EIA stakeholders including the developers, planners and EIA engineering companies are more interested in the status of their EIA project in the overall EIA procedure like the EIA process duration or the procedural status of their EIA project, so EIASS provides a service of real-time notification of an ongoing EIA project/plan to the applicable EIA stakeholder to facilitate the efficiency of the overall EIA process. Currently, this real-time notification service of EIA process is the most popular and satisfying function of EIASS among the users.

As the EIA process deals with environmental effects in time and space, the use of the most recently update data and the integration of the diverse environmental and geographical data are critical in preparing an accurate EIA report. However, acquiring the most recently updated geographical information data and the diverse environmental and geographical data can be a difficult and time-consuming task. Thus, EIASS is designed to collect and provide currently available and open-to-public environment-related geographical data to all EIA user groups without any limitation. With this function, the developers or EIA engineering companies can produce a more accurate EIA report by using the most publically available geographical data and all EIASS users can grasp the geographical features of the target area, such as land use, topography, elevation, protected area, and vegetation type. Due to the nature of geographical data, the most recently updated data may not reflect the current environmental or geographical condition. Thus, by providing most of all publically available geographical data in EIASS, the public or local residents who know the area can verify the accuracy of geographical data used in EIA report. The significance of EIASS GIS service in EIA is not simply limited to the provision of geographical data, but expands to the enhanced integrity of EIA reports and encouraging public participation in EIA process.

In addition, EIASS does not simply display geographical data on the internet, but also provides geographical analysis functions, for example, slope calculation of the user-defined area. With these geographical analysis functions, users can examine the site suitability of the target area for a certain development project. For example, if the target area is located on a very steep slope, a certain development project like an industrial complex development is unlikely to pass the EIA process.

So far, we have briefly introduced South Korea's EIASS, the web-based EIA support system, by focusing on its three main functions. While other features/aspects of EIASS are not mentioned here due to space limitation, it can be said that the three main functions of EIASS are the main factors contributing to South Korea's EIA system.

Despite the stable operation and the popularity of the EIASS, the participants of EIASS including the Ministry of Environment are still working on adding new functions and services for a better web-based EIA support system based on the experiences of having developed and operated EIASS for more than 15 years.