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## Evaluation of environmental impact assessment report preparation and public participation in landfill projects in Nepal



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### ABSTRACT

This study examined the effectiveness of environmental impact assessment (EIA) in landfill development projects for Kathmandu Valley municipalities in Nepal using a survey, focus group interviews, expert interviews, and observations. The study found that EIA reports are often prepared by incompetent contractors that are not accredited and the reports are poor in quality, too technical, mostly published in the English language, cluttered with irrelevant materials, too long, and frequently contain information copied from other documents. The survey results showed that 66% of the respondents were unaware of any public meetings conducted for EIA in the current landfill location, 69% of them were uninformed of any alternate landfill locations, 91% were unsatisfied with the governmental services provided, and only 14% were happy with the public participation conducted. Findings from other proposed landfill locations and an old landfill site corroborated that the government fell short in conducting EIA or upholding Nepal's environmental law, thus undercutting public support in such projects. In some cases, retroactive EIA was being conducted to create the appearance that the required procedures were followed, which clearly violated the spirit and elemental principle of the apparatus. In other cases, political parties endorsed EIA in place of public hearings. To rectify flaws in EIA and maintain quality and accepted rigor of EIA in solid waste management (SWM), it is suggested that Nepal devise EIA guidelines for the SWM sector that are more appropriate for local conditions, build institutional capacity, accredit EIA drafters, use alternate methods to notify people about proposed activities, and seek public participation and ownership in the project from the beginning.

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### Introduction

Environmental impact assessment (EIA) is a collection of procedures used to formulate decisions and serves as a guide, which offers an orderly, replicable, and cross-disciplinary assessment of possible bio-physical, cultural, social, and economic impacts of a future activity and its reasonable substitutes (INECE, 2013). EIA has been widely used in development projects globally since its inception in the United States in 1970 after the promulgation of National Environmental Policy Act 1969 (NEPA). In the United States, prior to 1970 government departments were largely

employing environmental impact measures to minimize any negative effects of federally funded work. A formal debate about environmental preservation and economic development tabled at the United Nations Conference on Environment and Development in 1992 additionally helped the worldwide growth of EIA. As a result more than 100 countries around the world have now adopted EIA (Li, 2008; Wood, 2003). More recently, Morgan (2012) reported that 191 out of the 193 member nations of the United Nations have adopted some sort of EIA policy.

The use of EIA is reasonably recent in Nepal, but its implementation has already raised eyebrows among people from many sectors, including the general public and experts. It has been said that EIA reports are merely rhetoric in Nepal because the reports lack further guidelines and monitoring, fail to win public support, and neglect the development of project alternatives, as well as incompetency, lack of political will and ill preparedness on the part

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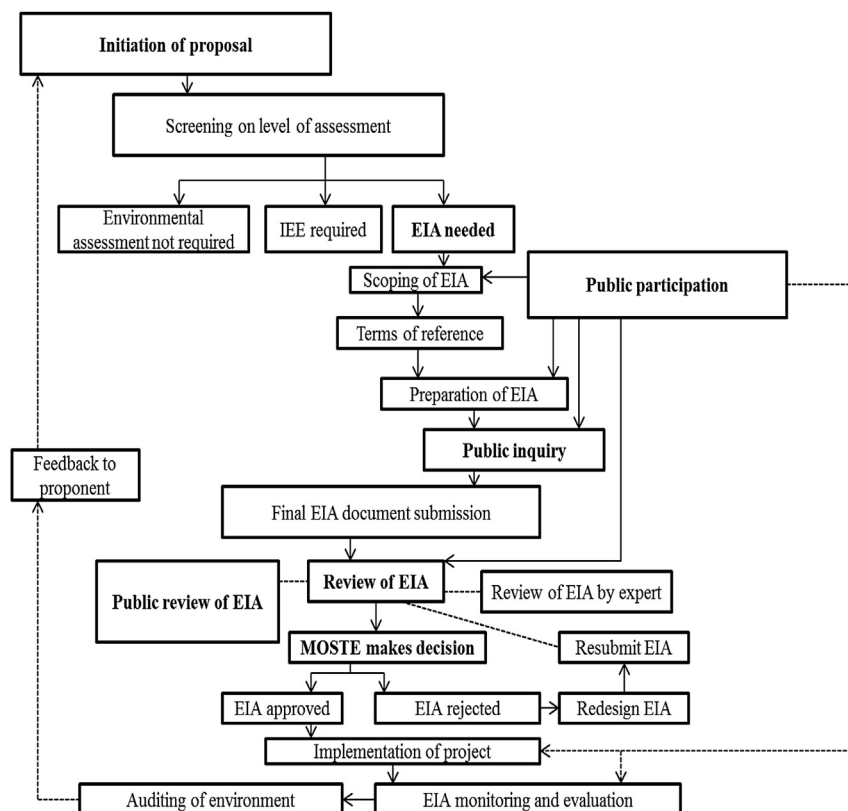
of government. Detractors point to the lack of a procedure to accredit report preparers, meaning that anyone could be preparing the reports. In addition, it is not unusual for the text of a report for one project to be copied into a different project's report. Project proponents are often concerned with the size and volume of the report as opposed to its excellence and substance. As a result, many reports contain irrelevant material and misinformation. Critical evaluations of Nepal's EIA system can be found in [Anneveldt and Pasman \(2001\)](#), [Belbase \(2003\)](#), [Bhatt and Khanal \(2009 and 2010\)](#), and [Dangi \(2009\)](#).

A close scrutiny of the environmental assessment steps shown in [Fig. 1](#) points to a possible procedural breakdown in the public participation and scoping of EIA, preparation of EIA, and public inquiry; within public participation and review of EIA; and among public participation, implementation of project, and EIA monitoring and evaluation in Nepal. Also, the available literature lacks any performance evaluation of sectoral EIA in Nepal except a few reports prepared by consultants ([GEOCE Consultants, 2009](#); [NESS, 2001](#)), one academic report ([Khadka & Shrestha, 2005](#)), and some country papers ([ADB & ICIMOD, 2006](#); [Anneveldt & Pasman, 2001](#)). This manuscript intends to fill the void by providing a more rigorous analysis aimed at a scientific audience with a chief emphasis on public participation. Additionally, this paper endeavors to dissect EIA procedures in one particular sector, waste management, to examine the disparity between EIA policy and its application in the field in Nepal. The research utilizes the basic frame outlined by the Environment Protection Act 1996 in Nepal to employ EIA systems and practices in solid waste projects mainly in Kathmandu Valley and proposes an innovative and participatory approach to enhance the usefulness of the instrument in Nepal and other developing areas. By focusing on one sector, the research can delve into the real defects of the EIA tool. Also, dissecting solid

waste management (SWM), which is still growing and has been prioritized as one of the five major environmental problems in Nepal, will better present an evaluation of the shortcomings of the current EIA procedures, areas where waste management could benefit from government agencies' interpretation of the legislation, resources allocation to recruit experts to prepare EIA reports, and methods to make the process more responsive to the public and accountable to taxpayers.

## Evolution of EIA in Nepal

Nepal formally adopted EIA in 1993. While Nepal's drive for modernization dates back to the country's First Five Year Plan of 1956–61, environmental issues were not discussed as part of the planning process until the Sixth Five Year Plan (1980–85) that called for the integration of EIA in the expansion of a facility for the Department of Soil Conservation ([Bhatt & Khanal, 2010](#)). EIA was introduced into sector wide development, primarily in improvement of hydropower projects, irrigation, drinking water, and road construction in the 1980s and early 1990s ([Belbase, 2003](#)). Later, the Seventh Five Year Plan (1985–90) played a pivotal role in bolstering the use of EIA in other sectors, such as agriculture, industry, tourism, water resources, transportation, urbanization, and forestry ([NCSIP, 1994](#); [UNESCAP, 2003](#)). Efforts to put EIA into practice were further strengthened with the authorization of the National Conservation Strategy by the Government of Nepal and the implementation of an EIA to understand the impacts associated with tasks in the Master Plan for Forestry Sector in 1987. Similarly, the interim Government of Nepal in 1990–91 supported use of EIA for any undertakings that would leave unwanted impacts in the environment. The Eighth Five Year Plan (1992–97) formally endorsed incorporation of EIA in economic activity, use of



**Fig. 1.** Schematics of EIA process in Nepal adapted from [Uprety \(2003\)](#). IEE = Initial environmental examination.

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