

**A TOOL FOR
INITIAL ENVIRONMENTAL ASSESSMENT OF
ROAD REHABILITATION PROJECTS**

J. Ambalavanar

(06/8863)



University of Moratuwa, Sri Lanka.
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Degree of Master of Engineering in Highway and Traffic Engineering

Department of Civil Engineering

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DECLARATION

“I declare that this is my own work and this dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any University or other institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text”

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“We have supervised and accepted this thesis for the submission of the degree”

Signature of the supervisors: 1.

Date:

2.

Date:

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ABSTRACT

The environmental assessment process involves the prediction of changes over time in various environmental aspects as a result of a proposed project. The prediction of the nature, extent, and magnitude of environmental changes likely to result from a proposed project is aided by various tools and techniques, the choice of which depends upon the impacts of concern, data availability or lack thereof, and the appropriate specificity of quantitative models. However, the choice of the appropriate method for conducting an environmental assessment can only be guided by certain criteria, but no single method will meet all the necessary criteria.

The environmental assessment is mandatory in Sri Lanka since 1988 only for the projects listed under the category of “prescribed projects” in the National Environmental Act (NEA). The road rehabilitation projects do not fall in to the above category unless it falls within sensitive areas or resettlements of more than hundred families are involved or projects located wholly or partly outside the coastal zone with a road length exceeding 10 kms. However, for funding purposes foreign agencies have made this mandatory even though they exempted from the environmental assessment according to the NEA. In practice this study might consume more time depending on the size of the project. As a result we might loose foreign aid allocations and prospective donors. Therefore a quick alternative method for environmental assessment is essential.

This study develops a checklist for Initial Environmental Assessment (IEA) of road rehabilitation projects which consumes only a week or so to carry out the IEA. The checklist was generated based on the literature survey, discussions with subject experts, questionnaire surveys and field observations made on road rehabilitation projects. It identifies activities, corresponding environmental impacts and suitable mitigations for each component of the road rehabilitation project. This study is unique because the attempts were made to provide much information as possible on the techniques and methods available for handling different issues in the environmental assessment process and it is specially designed to suit the Sri Lankan conditions. Further, it gives possible mitigatory measures for each impact and also comprehensively covers all relevant impacts identified in presently use checklists in Sri Lanka there by cut down the amount of time required for preparation. The RDA and other road sector organizations could use this checklist in future for their IEA studies. It is hoped fervently that, this study would provide a significant step ahead in improving the process of IEA and hence they may absorb more foreign aid funds and attract prospective donors.

Also this study recommends that, the use of checklist by a panel of experts, initiating a search for new cost effective mitigation measures, include the conditions stipulated on environmental clearance in to the project contract document, deploying a strong monitoring team, make available an environmental complain form at the project site, conduct site meetings regularly to discuss the issues / problems, report the progress to relevant authorities and providing training for the officials.

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LIST OF ABBREVIATIONS

Abbreviation	Description
ADB	Asian Development Bank
AC	Asphalt Concrete
CEA	Central Environmental Authority
DBST	Double Bituminous Surface Treatment
DF	Department of Forest
DS	Divisional / District Secretary
DWLC	Department of Wildlife Conservation
EA	Environmental Assessment
EPL	Environmental Protection License
ESD	Environmental & Social Division
EU	European Union
GSMB	Geological Survey & Mines Bureau
IEA	Initial Environmental Assessment
LA	Local Authority
NBRO	National Building Research Organization
NEA	National Environmental Act
PAA	Project Approving Agency
PI	Preliminary Information
PP	Project Proponent
PRDA	Provincial Road Development Authority
RDA	Road Development Authority
REA	Rapid Environmental Assessment
TOC	Threshold of Concern
TOR	Terms of Reference
UC	Urban Council
USA	United States of America