

**AN EVALUATION OF THE SOCIO-ECONOMIC  
AND ENVIRONMENTAL IMPACTS ON  
CONSTRUCTION OF SOUTHERN HIGHWAY  
PROJECT**

By

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**A Research submitted to the University of Sri  
Jayewardenepura in partial fulfillment of the requirements  
for the Degree of Master of Business Administration**

## DECLARATION

The work described in this Research was carried out by me under the supervision of Dr.Anura Kumara Uthumange and a report on this has not been submitted in whole or in part to any university or any other institution for another Degree/ Diploma and belief it does not contain any material previously published or written by another person, except where due reference is made in text.

  
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I certify that the above statement made by the candidate is true and that this research is suitable for submission to the University for the purpose of evaluation.

A handwritten signature in blue ink, consisting of a large initial 'A' followed by a series of loops and a long horizontal stroke.

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## **ACKNOWLEDGEMENT**

I am grateful thanks to my supervisor Dr. Anura Kumara Uthumange, Head of the Business Economic Department, University of Sri Jayewardenepura for all his kind guidance and valuable instructions given to me in order to carry out this research study successfully, without whom this report would have never been materialized. Specially, it is great pleasure to mention that his precious commitments and corporation towards me in spite of spending his valuable time in weekends and leisure in order to complete this study in the limited time frame.

I also would like to offer my thanks to MBA Course Coordinator Dr. Nimal and all other Lecturers of the Management Faculty of Studies, who gave guidance, support during my Master in Business Management program and the staff of the Faculty of Graduate Studies for their valuable assistance.

I offer sincere thanks to Dr. (Eng) Priyantha Wejesoriya, Consultant Engineer for all the support rendered to me not only limiting to the advising but also correcting of my writing style and proof-reading the script.

I take this opportunity to special thanks to my wife Sudeni and my Mother for encouraging me to complete this study and their fullest co-operation extended to me and also my little three sons for bearing with me when I had no time even when they really wanted fatherly attendance.

## **ABSTRACT**

This research study has focused on issues related to the Socio-Economic and Environmental impacts felt by the local population, resulting from the construction of the Southern Transport Highway Project (STDP). The STDP has undergone several changes during the project design and project implementing stages due to several unexpected issues that are a concoction of technological constraints and budgets that have origins in the finalization of road traces and establishing the methods of construction, supervision and mechanisms for monitoring of the impacts.

The significance of this study is to reveal the Socio-Economic and Environmental Impacts that results from the action of four main categories, viz., the Government, Contractors, Researchers and the Community. It will attempt to capture the true picture of impacts towards the inhabitants living close along the described road trace. In addition to the expected realizations, this study may help project designers and planners to evaluate the current environmental issues and to adjust mitigation actions in order to avoid negative environmental impacts in the longer term.

A key objective of this study is to determine the amount of social distress due to the implementation of southern highway project and how it could be minimized thorough the implementation of alternatives and mitigation measures.

A technique random sampling based analytical process was used in the study. Data was collected through a questionnaire administered on a segment of the respondent population within a 400 – 500 meter trace along the expressway.

The Southern Expressway has been a sizable social and economic investment for Sri Lanka. It is hoped that this study may add to creating an enabling climate for the mitigation of both social and environmental impacts and may be an anecdote for projects of similar nature yet to come, particularly in relation to impact management.

# Chapter 1

## 1. Introduction

Socio economic and environmental impact assessments are an integral component in the planning, design, construction and commissioning of infrastructure projects in any part of the world. Road construction is one such infrastructural component of any country's Development Master Plan.

Road infrastructure is a necessary pre-requisite for development in an overall sense for any given country as it is only with the development of roadways that other infrastructure components such as telecommunication lines, power cabling and transmission apparatus, etcetera can be effectively deployed. Roads provide the means to bridge the gaps or distance between two or more destination points, and it is normally leveraging the presence of roads that other service sector areas can be effectively undertaken.

Road construction also involves the creation of additional employment opportunities and reduction of poverty indices as road infrastructure projects in turn demand supporting industries such as production and civil construction to come into force so that the necessary raw material and construction activities could begin.

Road infrastructure development can also be interpreted, retrospectively as a *distress* or *near-disaster* activity for inhabitants living close to the road construction itself in terms of cultural, economical, social and environmental value systems (Bodansky, 1999). This aspect may be dominant more so when the construction of the project is at the beginning stage. If the project is successful in attaining the desired output, say for example if an expressway (highway) that is built is readily utilized by the motoring traffic for which it was created a new economic and social culture is likely to be built in the area concerned and a new type of social economics in the nearby area is expected.



The impacts felt by nearby populations in a road project could be categorized typically under two main categories: '*while construction*' and '*after construction*' periods.

The Southern Transportation Development Project (STDP) of Sri Lanka has now reached the final stage of construction. It is estimated that project completion would occur towards mid-2011 covering Kottawa to Matara of nearly 126km. An initial impact assessment has been carried out by an experienced team led by the Former Dean of the Engineering Faculty in the University of Moratuwa of Sri Lanka (*RDA monthly Progress Report STDP, 2002*). However it is observed that there has been no intermediate assessment carried out so far since 2005 when the original and initial assessment was done.

The Sri Lanka road project has also been named as the '*First Expressway*' in Sri Lanka and currently there are many parts of it under design, approval and implementation stages. Due to the complexities that arose in the project, the time-table has been delayed by about two years compared to the originally estimated period that called for completion in year 2009.

The STDP involves the construction of a 126-km long expressway from Kottawa to Matara with a design speed of 120 km per hour. The project would involve modern state-of-the-art engineering methods and will be financed by bi-lateral and multi-lateral donors along with sizable inputs also from the Government of Sri Lanka. The project work commenced in Year 2000 and will be completed in Year 2011 (*Project Review Report STDP, 2006*).

The *Road Development Authority (RDA)* is the Implementing Agency for the Project, and the *Ministry of Expressways and Road Development* is the Executing Agency (*ADB 2009*). The Project has financing for the construction of a new access-controlled



expressway, the Southern Expressway, linking Colombo (at Kottawa) with Galle and Matara. Asian Development Bank (ADB) and Japan Bank for International Cooperation (JBIC) providing co-funding for 50% of the balance for construction of the expressway segment from Kottawa to Galle (101.5 Km including 5km to Galle Port Access). The Pinnaduwa to Matara segment (35.8 Km) is being financed by the China Exim Bank. The financial assistance has been in the form of soft loans with a payback period extending from 15 – 20 years with a nominal interest percentage.

The Government of Sri Lanka (GoSL) through the RDA will finance continuous operation and maintenance for the Expressway. Japan based JBIC is financing the northern section (66 kilometres) from Kottawa to Kurundugahahetekma and the ADB is financing approximately 29.3 km section, starting from Kurundugahahetekma to Pinnaduwa in the Galle District. Construction of the ADB section began in 2003. Work for the JBIC section began in 2006. Construction of the Galle Port Access Road (GPAR) will link the existing Colombo–Galle road (A2) via the Pinnaduwa Interchange. The 5.6 km GPAR will be a no-access controlled four lane expressway.

### **1.1 STDP Deliverables and National Significance**

Following deliverables were bound to the STDP in terms of National Significance.

#### ➤ Project Purpose

The STDP project is expected to access to and from Southern region and reduces traffic congestion and travel time, improve the road safety of the country expressway and Regional development (*Project Review Report STDP, 2006*).

#### ➤ Project Output

The project is expected to add a major transportation milestone and enhance energy efficiency involving for the road-works in Sri Lanka in terms of saved fuel (*Project Review Report STDP, 2006*).

➤ Poverty Reduction

The STDP project's overall objective fall in line with reduction of poverty in the southern region, integration of southern region in to the Country economic mainstream and to promote regional development (*Project Review Report STDP, 2006*).

The national significance could be highlighted in the following manner:

1. Major transportation Link to the South of the Country

The project is expected to provide a major transportation link between the south and the capital city Colombo, where the agricultural produce and other commodities all would find a fast way to reach the markets. Additionally the increased transportation facility would be an incentive on tourisms, passenger traffic and so on.

2. Increased fuel Efficiency & Decreased Congestion

As the expressway is a true 'highway' with a design speed over 120 km/hours, it can be expected, from an energy efficiency angle that vehicular engine efficiencies would be better and this would contribute towards fuel savings. Decreased congestion would ensure a supporting effect to increasing fuel efficiency

3. Increased fuel Efficiency & Decreased Congestion

Increased impetus toward rural development. AS the expressway traverses into the rural areas of the south, the opportunity towards rural development would be higher. The expressway would be a conduit between the fare south and the modern metropolis of Colombo City.