

CHAPTER 2:

2. FUNDAMENTALS OF ROAD SAFETY AUDIT

2.1.1. General

The Road Safety Audit (RSA) System was first introduced in the United Kingdom in the early 1990s and then gradually spread internationally. It is a system whereby outside experts conduct safety assessment related to road construction.

In the U.K., Road Safety Audit is defined as “the evaluation of highway schemes during design, and before the scheme is opened to traffic, to identify any potential safety hazards which may affect any type of road user and to suggest measures to eliminate or mitigate those problems.” This process was developed in the U.K. in the early 1980s as an Accident Investigation and Prevention (AIP) technique, when engineers noticed accident problems developing on relatively new roads.

In light of this, an initiative emerged for institutionalizing procedures as a more cost-effective way of securing road safety. In these procedures, safety assessment is done at an early stage of design and planning in a highway scheme, and improvement is required when any problem or risk factor is anticipated, because improvements, if any, are less cost effective once the highway has opened to traffic.

The RSA system established in the U.K. spread to New Zealand and Australia, and now it is used as a model in many countries for the formulation of guidelines and planning of some trunk roads. RSA has also become mandatory in planning national highways in Denmark. Many other countries have introduced the RSA system, or started feasibility studies including pilot programs. For example, Thailand, Malaysia, Singapore and South Africa already use RSA, and several states and provinces in the U.S. and Canada, Vietnam and China apply RSA to some of their highway schemes. In Northern European countries such as Finland and Sweden and in Western Europe, use of RSA is strongly supported and more and more countries are studying the applicability of the system (**Figure 2.1**).

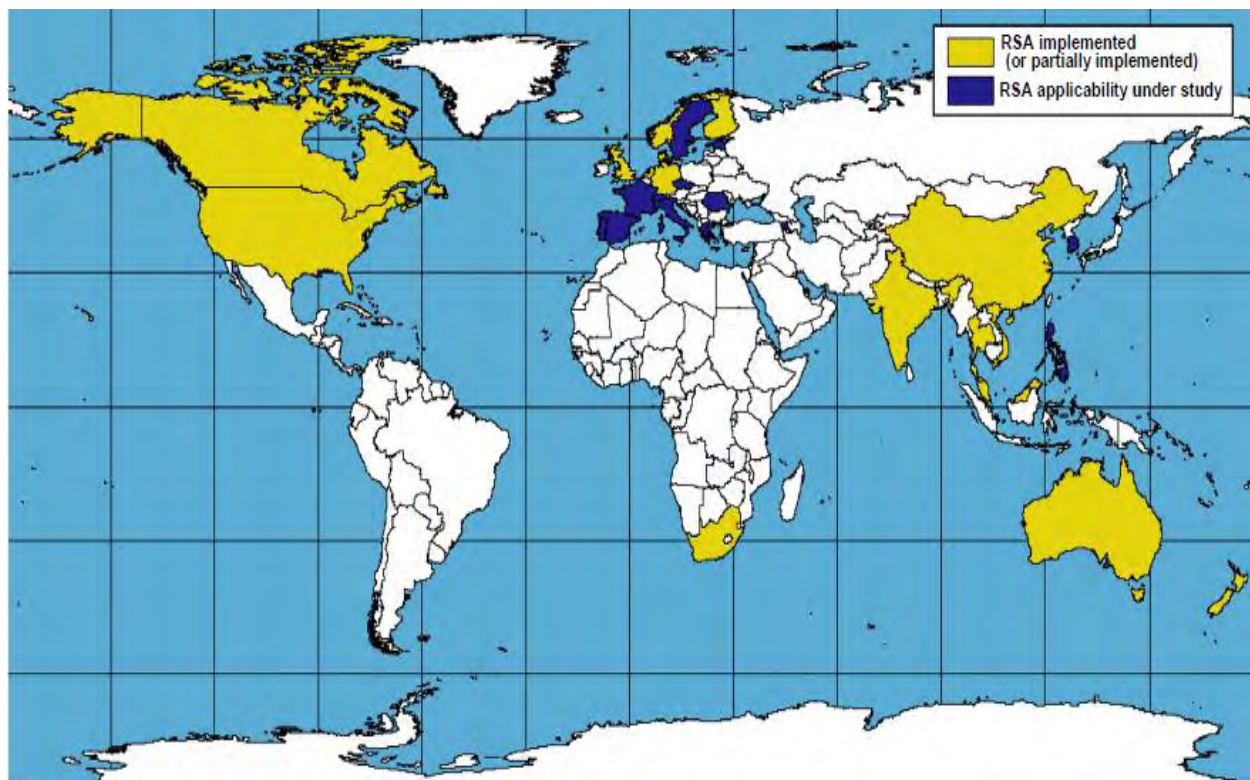


Figure 2.1: Countries Implementing RSA

2.1.2. Introduction

Accident reduction and accident prevention are the two main strategies in road safety work. In accident reduction, we use the knowledge of accidents that have occurred on our existing roads to improve the design of the roads or to influence the behaviour of road users, so that similar accidents do not occur again.

Accident prevention is the application of expertise in safe road design - road geometry, as well as the materials used - when we construct new streets and roads or redesign the existing roads, regardless of the reasons for which an individual project is undertaken. This expertise is the result of research and to a significant extent of practical experience gained through working on accident reduction.

To reduce the accidents, severity of the crashes and its prevention, we are using the road safety audit.

2.1.3. Definition of road safety audit

Road Safety Audit (RSA) is a formal procedure for assessing accident potential and safety performance in the provision of new road schemes and schemes for the improvement and maintenance of existing roads.

(OR)

The internationally accepted definition of an RSA as used from The Canadian Road Safety Audit Guide[NCHRP] and is as follows: “An RSA is a formal and independent safety performance review of a road transportation project by an experienced team of safety specialists, addressing the safety of all road users.”

This stretch happens to be a very important stretch as there is heavy movements of all kinds of vehicles. This stretch includes the IT corridor as well as the industrial hub and it also has many landmark educational institutions in it. The no of accidents has had a drastic impact on the socio-economic development of the region.

2.2. Objectives of the project

The main objective of this safety audit is to ensure that the Highways running from RR Nagar to RR Medical college (SH -17) and Kengeri to Near JSS College (Uttarahalli main road) should operate as safely as possible.

- To collect the accident data on a ARTERIAL and SH 17 passing through urban stretch of BENGALURU for a period 2009 - 2012.
- To identify most accident prone location by Equivalent Property Damage Only method.
- Collection of Current traffic volume at the selected black spot.
- Preparation of check list for Road Safety Audit and inspecting the accident spot to identify potential safety problems for road users and others affected by a road.
- To minimize the risk of accidents on the adjacent network of road and suggest suitable measures to counter the accident.
- To establish Ranking of Black Spots and to apply Road Safety Audit.

The below map (**Figure 2.2**) shows the selected stretch of the road, the blue color represents the SH-17 Mysore road and red color represents the Uttarahalli main road.