ABSTRACT

“Human Security: A Study of Disaster Management with special reference to the Road Safety in Maharashtra”

1. Introduction: Human Civilizations have been thriving on their natural ability to stay secure and protect from nature’s fury or ill-conceived or ill-intended or ill-directed human actions. Natural and Human induced disasters have been affecting the mankind for centuries. These disasters are threatening to Human Security, shake the very foundation of balanced social, economic and cultural life and challenge existence of the communities.

With automation, the collateral threats of human induced disasters and road accidents have risen considerably, taking toll of human lives, causing serious injuries, creating economic and social criticality and offsetting the balance of individual lives, families, communities and even nations. It is important to understand the need to prevent the wasteful acts. It is also required to mitigate the processes and swiftly respond to emergency events to minimize the damage. Well planned, coordinated, directed and effectively executed actions to ensure that the balance in human lives remains on an even keel. One such type of calamitous event is the “Road Accident”, which severely affecting on human beings. Individually, this menace appears small; however, a series of it, added over a time, poses extremely serious challenges to human security. It is an avoidable event that needs to pay the immediate attention at all levels.

In a country like India, where 54% of the population is still below 25 years of age, the security of this human resource and its logical qualitative development is an important aspect for National Security as well as National development. This human asset can be protected through various proactive measures in a manner that a regime of prevention of the threats is instituted and in case of occurrence of it, adequately responded. India has one of the highest accident rates in the world. In India, each year, more than 4.2 lacs accidents are reported with fatalities more than 1.35 lacs in numbers and costing approximately 65,000 corers of rupees. However, India continues to face such a loss of the youth which is a national asset and this is causing adverse demographic and economic implication on the country. The record of Road Accident in Maharashtra is also horrible and very hard to digest.

In view of this information to find out the material facts therefore, Maharashtra has been selected as a special case for the purpose of this research. There is a need to study the status of the human resources including the Government stakeholders to enhance the preventive, mitigational measures and response mechanism towards the Road Accidents. This study is helpful to enhance the better human security through reduction of risks of road accidents by active and dynamic preventive, mitigation and response measures which will contribute to the National Security.
2. **Rationale and significance of the study:** In India, the picture of Human Security in relation to road accidents, is dismal and needs to be immediate corrections. This study has attempted to bring out the present anomalies and suggest practical and effective means to reduce the threats of insecurity attributable to the hazard of road accidents. This study is likely to bring the following benefits to the society-

(a) The study has been objectively identified the causes, social inclinations and processes that either contribute towards road accidents or act as obstructions to safety.

(b) The study has identified, practically implementable measures, which, if adopted, it would certainly improve internal safety and security of the country through strengthening the Man power. It would particularly help to protect India’s human resources along with their endowed abilities.

(c) This study also identified prevention and mitigation measures of Road Accidents in Maharashtra. This model can be replicated to all over the country to reap the expected benefits from it. Improve Human capacity towards road safety so that it would act towards the prevention, mitigation and response mechanisms and thereby would help bring down Damages and Losses by virtue of accidents.

3. **Aims and objectives of the study:** The aim of this research was to analyse the effects of Disasters on the Human Security, furthermore to study the aspect of Road Safety in depth, as applicable to India with specific applicability to the state of Maharashtra. The following are specific objectives-

(a) To highlight on the linkages between National Interests Road Safety and Human Security related to Disasters. It is also aimed to establish a relationship between human losses and economic and administrative liabilities. Also analyse impact of road accidents on the National development through empirical and statistical analysis.

(b) To study the gaps in policy, control and monitoring mechanism, societal status in terms of community’s knowledge, attitude and behavior (KAB) patterns.

(c) Identify interventions of the Government agencies, NGOs, Community, Media, Corporate and Insurance companies to build up strategic, operational and tactical measures for Prevention, Mitigation and Response to ensure better risk reduction and enhancement of Human Security through ensuring better Road Safety.

4. **Hypothesis:** The following hypothesis which has adopted in this research-

(a) The loss of human resource due to Road accidents adversely affects Human Security as well as National Security and National Interests.
(b) To ensure Human Security in view of road safety; it requires strategic, operational and tactical interventions by all stake-holders.

c) For greater Road safety, risk reduction and capacity building; it must ensure better prevention, higher degree of mitigation, better preparedness and speedier response. Apart from these, strategic interventions like intrinsic planning and development of infrastructure, greater degree of synergy of all stakeholders and enhancing responsiveness of the community are essential factors.

d) People’s Knowledge, Behavior and Attitude directly affects on the Road Safety.

5. **Research Methodology and Techniques:** This study is mainly based on primary and secondary sources. Details are as follows-

(a) The methodology for this research entailed consulting, reviewing and qualitatively analysing data from a number of websites, journals, and annual reports.

(b) In order to study the every aspect of road safety and security; the descriptive and analytical method is adopted to examine the facts and figures of the literature and to reach up to the genesis of the problems.

(c) A combination of Survey and statistical analytical model method is used exclusively in this study. To discover the ground reality, observations have been carried out during field visits. Questionnaire based on KAB (Knowledge-Attitude-Behavior) model is also used especially for the study of road safety. This study, with all the combination of intent and methods, finally falls in the realm of Exploratory Research.

6. **Tools used in the Collection of the Data:** The present study is based on primary and secondary data which includes-

(a) The required study material was obtained through literature survey. Library Consultation Programmes conducted to acquired Primary and Secondary data i.e. variety of relevant literature.

(b) Personal interviews and questionnaires based interviews are conducted with subject experts and eminent persons to collect the Primary data e.g. NGOs representatives, Government servants and Drivers. Etc. Primary Data is also collected from Government documents i.e. Records, Policies and official reports including white papers.

(c) To acquire the first hand knowledge and required data; fieldwork and observations was carried out in order to justice with the undertaken study.

(d) Websites are referred to acquire secondary data, variety of literature and to know various facts and figures.
7. **Scheme of Chapterisation and its conclusion:** Present study is comprised seven chapters, which includes Introduction and Conclusion. Chapter 2\textsuperscript{nd}, 3\textsuperscript{rd} and 4\textsuperscript{th} are mostly covers literature review at conceptual level. Chapter 5\textsuperscript{th} relates to the Case Study of Road Safety ‘issues related to the state of Maharashtra. Chapter 6 is based on the primary data that was collected, collated, synthesized and analysed by the researcher. The schemes of chapters are as under-

(a) The first chapter being ‘Introduction’ discusses about the entire research work, which gives the basic idea about National security, Human Security, Disaster, Disaster Management and Road safety scenario and the research methodology in brief. It also specifies the significance of utility of the research. It has given details of research design along with scheme of chapterisation including aims & objectives. The chapter is also based on the basic conceptual framework and in the context of redefined concept of National Security that encompasses Human Security and is closely related to Disaster Management and further to Road Safety. This has established the relationship between Human Security and the National security, with further linkage to the Road Safety as a major form of Disaster.

(b) The Second chapter is entitled as ‘Conceptual Framework of National Security and Human Security’. It highlighted the meaning and concept of National Security and Human Security. It has drawn the due attention towards the relationship between National Security and the National Development. This chapter also dealt with the Human Security from the perspective of the Disasters and specifically, the road accidents and Road Safety. This chapter establishes the linkages between Human Security, Disasters and its connectivity with National Security.

Chapter concluded that loss of valuable human assets results into a great loss to the Nation. Human Resources of the country are most important part of the Nation in every respect. Human Resources i.e. “Manpower” plays a vital role during war as well as peace too. Therefore it is highly essential to safeguard and secure these Human Resources against the such threats of road accidents. Human security is an emerging paradigm for understanding global vulnerabilities and whose proponents challenge the traditional notion of National Security. Human Security argues that the proper referent for security should be the individual rather than the State.

(c) The Third Chapter i.e. ‘An understanding of Disasters and its Implications’ has described details of fundamentals of issues relating to disasters and focuses on Maharashtra’s Hazard, Risk and Vulnerability. This chapter also dealt with the statistical data of effects of various disasters. In this chapter an attempt has been made to highlights on the implication of disasters in wider context.

Disasters are a regular syndrome the world over. Meaning of disaster can be conclude as it is catastrophe, mishap, calamity or grave occurrence from natural or man-made causes, which is beyond the coping capacity of the affected community. A disaster occurs because of a Natural hazard or a Human Induced Hazard that activates and goes beyond a threshold and causes damage and loss.
to many elements like life, infrastructure and property, processes and environment. All these create economic, socio-cultural and human security related imbalances adversely affecting a nation. It requires deliberate and proactive efforts to remain stable. As the normal procedures are not sufficiently efficient to handle grave situations as well as the need for preparedness, a proper Disaster management system has to be created through which the community could fight against and overcome adversities.

(d) The fourth chapter is ‘Disaster Management: Present Status of Maharashtra and Its Assessment’, which deals with Disaster Management at various levels. A detail study has focused on the entire disaster management process. This chapter also attempts to articulate the disaster management organization from State level to village level, especially in Maharashtra. The study also comprises the existing reforms in disaster management of India and especially of Maharashtra.

The basic objective of Disaster Management is to deal with the disasters through promoting a culture of prevention, resilience, preparedness and response at all levels. Attentiveness, awareness, information, modernization, modern equipment, legal framework are the important factors for implementation. Synergizing actions of all stakeholders and monitoring plays a vital role in DM. Security of lives, property and environment is the top agenda of DM activities. Government of India has made proactive regime of prevention and mitigation as primary strategy with support of all stakeholders in preparedness so as to respond effectively. A various initiatives at Government level have been a step-up in the right direction for accountability and work direction. Notwithstanding the enhanced capacities, there are many gaps that still exist. These gaps are in terms of community awareness towards prevention and mitigation. Synergy between different stakeholders is still below par. Our Emergency Operation centers are still not fully active and proficient. There is no separate frequency allocation for disaster management. The districts and Talukas have not been able to upgrade their DM plans fully. Upgrades in ESF (Emergency Support Functions) capabilities are still largely pending and integration of Home Guards and Civil Defence is still on the paper. Above all, the aspect of community awareness has been very difficult because of sheer volume of work involved. To ensure resilience against disasters, these gaps will have to be speedily covered.

(e) The fifth chapter is entitled as ‘A Case Study of Road Accidents and Road Safety in Maharashtra’. This chapter gives brief review of the approaches towards the Road Safety and security. It focuses on the attitude of Individuals in relation to the Road Safety. The aspects of the previous chapters are studied in greater details in respect of Road Accidents and road safety. The accident related issues in urban, rural and National and State highways have been dealt with. Chapter gives entire information about Road length, Vehicular Population, Accident Scenario as well as other major concern towards Road Safety, covering the injuries and fatalities by spatial segments.
Disasters including road accidents have been occurring at higher frequencies, greater magnitudes and severe complexities as the world has switched over to fast track development. In our Country every year more than one 1.3 lac people die in road accidents, and there is a loss of National property i.e. man and money is to the tune of sixty five thousand crores or even more. It is regret to mention that Maharashtra is the highest contributor towards road accidents in the country. This statistics provoke us to think about the seriousness of this subject and lead to consider the huge impact on economic, administrative and human security of the nation. The risk reduction attributed to Road Accidents becomes a priority issue for India and needs to be seen holistically.

Presently, the Government structures have been devised such that the Road Safety is not dovetailed into Disaster Management and functionally these two aspects are being dealt with in watertight compartments, each taking own actions that are not in sync with one another. It is essential to establish a unified regime of both these functions. To improve the national status, objective ways will have to be instituted for preventing the accidents. Better road infrastructure, greater control and stricter legal systems, inculcating higher sense of responsibility and awareness and more efficient response systems is required to enhance Road Safety. Towards this, closer coordination and technological support is highly warranted. It should be borne in mind that the cost of any accident is far greater than the calculable cost of damage, insured life and legal as well as administrative costs. It has an incalculable socio-economic impact that transcends deeper than what is visualized.

(f) The sixth chapter being ‘Data analysis And Interpretation’ briefs systematically the methods of data collection, sources of data collection, elaborates on sampling Plan and size, tools used for data collection, method of processing data, reasons for using specific methods etc. The whole gamut of results is prepared in a logical sequence followed by the actual discussions. An attempt has made to conduct the pragmatic study which mainly consisted on survey of the areas visited.

Road Accidents have been causing maximum deaths in the world and in India; it is near about 10% of the share of deaths caused each year due to road accidents. Within Maharashtra the number of road accidents per year is very high and really alarming. The continuum of Road Accidents includes causative factors and stakeholders and their interaction is quite complex. The elements that were studied through empirical Data suggest that; Degree of negligence while driving or breaking of rules and norms by the active stakeholders has been very high. This aspect needs to be attended to for better control. Knowledge and awareness level of the active stakeholders is low and affects their standard of driving. Social sense, sense of responsibility and discipline of the road users is shockingly low and needs to be enhanced. The quality of humans in the country in this regard needs to be enhanced. Degree to which traffic control is established is inadequate. Only in the cities,
during certain times the control appears to be adequate. At other places and especially on the
highways the control is abysmal. The aspect of vehicle fitness and control is critical. Not many
vehicle users regularly maintain their vehicles. Post accident response in terms of medical aid, legal
procedures and compensation requires major improvement in quality and synergy. Road design and
construction norms and upgrades deserves major attention. Presently, this aspect is only indifferently
handled. Funding is a major issue here. Coordination amongst the Government agencies is required
to be of high standard. Role of NGOs and other stakeholders that are not part of the government
machinery is superficial. Education standards of students, community and need to be enhanced.

Finally, ‘Conclusions and Recommendations’ presents findings that have emerged during
the research. It discusses the problem and focuses on prospects of the Disaster Management and
Road Safety. This chapter indicates the importance and impact of the same in the entire research
study. This chapter enumerates problems with possible solutions, through recommendations towards
minimizing of risks and the ill-effects of road accidents and thus vindicating the aspects contributory
to Human Security.

However, Road traffic safety is an outcome of interactions in integrated system of roads,
road users, monitoring mechanism and vehicles. Whenever agreement among these sub-systems is
distressed, the chance of accident occurrence is increases. Road safety could only be enhanced by
attaining a harmony in the above sub-systems and for which an integrated approach for preservation
and enhancement of functional balance in these sub-systems is warranted.

8. Key Findings and Recommendations:

(a) Findings: The existing status of disaster management and road traffic management is
does not meet international standards. Law enforcement authorities seem to pose resistance to the
implementation, which became evident in the response to the questionnaires of the study. The level
of ethics also seems to be low during the phase of disaster and accident. During disaster and
accidents fraud, corruption and plundering were occurred. From the descriptions of the study to
deal with; the following finding are emerged:

(i) Road crashes often result from a series of root causes that is the vehicle which is
responsible for 5 to 10 per cent of crashes, road infrastructure which 5 to 15 per cent of crashes
may be attributed and road user behaviour which is responsible at least in part for some 75 to 80
per cent of road crashes.

(ii) Non availability of vehicle testing, Defects in vehicle, inadequate maintenance and the
overloading are the major vehicle related causes of the road accidents.

(iii) Inadequate funds, poor management of construction, and substandard facilities and heavy
traffic congestions are the causal factors of road accidents.
The human factor of error has a greater role to play in society’s present road safety problems. Human behaviour, attitude and the knowledge are contributing about 75-80% in total causes of accidents. Inattention, Nighttime driving, Overtaking dangerously, Lane Cutting, casual attitude of driver, Traffic violations, Lack of pedestrian discipline, Over speeding and impaired driver’s fatigue and Not wearing Helmet are the foremost accountable causes to increase an accidental toll.

Inadequate machinery for Law Enforcement, Inadequate institutions, Isolated responsibilities, Lack of Expertise, insufficient resources, Unavailability of Safety Audits, Insurance unawareness, Media ineptitude, deficient health Services and facilities, Poor Community Participation are the some issues which increase the vulnerability and risk level in the area of Disaster Management.

b) Recommendations: Disaster Management and Road safety are a shared, multi-sectoral, responsibility of the government and a range of civil society stakeholders. For the success of Disaster Management and Road safety; a various suggested actions are includes i.e. it should be a political priority, provide adequate resources, and make it publicly accountable, should develop a multidisciplinary approach, Set appropriate targets and establish preventive plans to achieve them and Support the creation of safety advocacy groups etc. These suggested actions will be very effective to enhance human safety and security. Following are meticulous suggestions to improve road safety.

(i) Ensuring Vehicle testing, Regular Maintenance of vehicle, Vehicle discard system for old vehicle should be strictly implemented to enhance road safety.

(ii) Well planned roads and equally maintenance of them should provide the base for safe driving. Fund allocation, Road Design and Facilities, Provision of Footpath for Pedestrian, Removal of Encroachment, Provision of Cycle Tracks, Lighting and road signs and Alternate transportation system is consequently recommended to reduce number of accidents.

(iii) It is necessary to improve behaviour approach of drivers and enhance their, Knowledge and skills. Drivers need to be better educated and trained when initially learning to drive. They should be taught technical, social and psychological skills to be a safe, responsible professional driver.

(iv) Given Recommendations in the area of Disaster Management can reduce the risk. Target Based Financing, Community Training, Research & Development, implementation of PPP projects, effective media participation, Prevention and preparedness planning, Capacity Building of Implementing Organization, effective Command, Control and co-ordination, adequate medical attention, Insurance awareness, Enforcement of Safety Laws and standard roles and responsibility dissemination etc. is highly recommended in this manner.
However, Disaster management and road safety requires multi-disciplinary and pro-active approach. In achieving our goal of moving together, towards safer India; the Governments, the community, civil society organisations and media also have a key role to play. Our mission is vulnerability reduction and accident reduction to all types of hazards as well accidents; be it natural or manmade. Although it is not an easy task to achieve, but not impossible if we put our sincere efforts together. It is high time that we acknowledge that road safety is part of disaster management regime and the road safety trends are slipping out to acquire a giant proportion in terms of human losses and pressures on the administrative and social systems. We must bring the entire gamut of efforts under one umbrella of united thought and actions for benefit of human life. It is only then our future generations will be safe. Our vision 2020 is to build a safer and secure India through collective efforts, India will be the super power and we shall strive to achieve this goal with missionary zeal.

Date:
Place:

Signature of the Research Student                          Signature of the Research Guide

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