PREFACE

One of the biggest challenges for the business organizations and industries in 21st century is the growing need for integrating environmentally sound choices into supply chain management in logistics practices. Organizations and industries are aware of the various environmental initiatives but have failed to take the benefits of implementing them in wide scale. They need to realize the benefits commercially due to these new initiatives taken to integrate sustainability and green issues with Supply Chain Management (SCM). Sustainability or green supply chain issues are yet to come in widespread manner on Indian industries and specifically in process industries especially the chemical industries.

In chemical industries diverse products are manufactured, using various conventional and semi modern technologies. Chemical industries in Gujarat are fragmented and dispersed. They are multi product and multifaceted – which really makes it complex and challenging for them to address sustainability issues. The sector has been labeled to be one of the most polluting sectors. They also account 60-65% of the total industrial pollution in India. They generate hazardous waste, which find their way uncontrolled into the environment. Chemical industries are more critical and important for implementing various Environmental Management Programmes like Green Supply Chain Management (GSCM). The thesis includes the detail study of the various concepts related to GSCM applicable in chemical industries. Thesis includes following main sections in brief.

Chapter 1 of introduction describes the evolution of green supply chain concept, its importance in chemical industries in Gujarat. The chapter also includes the other details of the chemical industries in Gujarat state, aims and objectives of research and a brief outline of the thesis.

In chapter 2 of literature review, the basics fundamental and review of research on green supply chain management is included. The understanding and definitions of supply chain management and evolution of GSCM and GSCM practices is discussed. The next part of literature discusses the various drivers and motivational factors effecting organizations to adopt green supply chain management practices. Following part of the review includes the various GSCM practice. The literature then discusses
the various broad parameters of green supply chain performance and its relation with GSCM. The chapter will then conclude that there is a gap in the literature in terms of research on application of green supply chain management (GSCM) in some specific industries.

Chapter 3 of research methodology includes the rationale of the study and research design followed for primary research. This study used a descriptive research design to determine the relationships among various components of GSCM Drivers, GSCM Practices and GSCM Performances and interrelationships among them. The data was collected from managers of Environment Management Systems (EMS) departments at various chemical industries in Gujarat.

In chapter 4 of data analysis and discussions, the data analysis includes the descriptive statistics, reliability statistics, single and multiple regression analysis. The Cronbach alpha was used to check the reliability of the various dimensions of research questionnaire and in all cases the reliabilities were found satisfactory. Single and multiple regression analysis was used to explore the relationships among various dimensions of GSCM Drivers, GSCM Practices and GSCM Performances.

The major findings of this study have been described in detail in Chapter 5 of major findings and recommendations. Recommendations and suggestions are given for the industry, government; ministry of environment and forests, pollution control boards and chemical industries association.

Chapter 6 brings the conclusion and implications of this study. This research helps managers of chemical industries in Gujarat to understand that the green supply chain management concept and can help them their organization achieve and improve upon various organizational performance parameters.