PREFACE

In a span of one decade, between 2001 and 2011, the number of million plus cities in India has increased from 35 to 53, while the number of towns and cities has increased from 5161 to 7935, leading to an overall increase in the proportion of urban population from 27.8% to 31.2%. Out of this urban population, about 25% lives in India’s largest 10 cities (JNNURM, 2011). Urbanization as well as rural-urban migration have accounted for most of the population growth between 2001 and 2011. It is projected that India’s urban population would increase from 380 million in 2014 to about 600 million in 2030. Such a massive increase in urban population would also create huge challenges for urban local bodies, mainly in maintaining the environmental quality without any compromise in the human well-being. It is beyond doubt that urban planning, infrastructural development and the resource consumption patterns of the emerging urban space will impact ecosystems both within cities’ boundary as well as outside, with implications for the quality of life for people across the country (Aggarwal and Butsch, 2012). Problems in the levels of amenities as well as natural resources endowments may arise where housing projects inadequately deal with environmental impacts. One of the most pressing issues with regard to the environment is linked to human settlement in world’s growing cities and towns. Environmental Impact Assessment (EIA) is a process used to predict the environmental consequences of any developmental project and recommend suitable mitigation measures to decrease possible adverse impacts. There are several guidelines and policies on housing projects with reference to India i.e.; government of India notification 1994, 2006, 2009 which guide in proper management and planning of housing or construction projects.

Present study explores the concept of EIA and carrying capacity with respect to housing projects using fuzzy AHP modeling techniques and conflict analysis. Baseline and current environmental status, long term land use change and the effectiveness of EIA system implemented in the housing projects are also studied in detail.
The whole work of study is arranged in eight chapters:

**Chapter 1**-provides an introduction of housing projects, Remote Sensing and GIS techniques in EIA and outlines the objectives and significance of the research study.

**Chapter 2**- provides the review of literature with respect to EIA, housing projects, fuzzy AHP modeling techniques, and role of Remote Sensing and GIS.

**Chapter 3**- provides methodological framework adopted for this study with various components.

**Chapter 4**- outlines brief information about the study area of the research.

**Chapter 5**- deals with the assessment of the baseline and current environmental status by a comparative study and outlines interpretation of the results.

**Chapter 6**- provides the summary and conclusions of the present research work. In this chapter an attempt has also been made to draw policy implications of the work with reference to findings.

**Chapter 7**- deals with the suggested strategies and recommendations. In this chapter some suggestions and strategies are recommended for the effective EIA of housing projects in Lucknow city by considering the future prospects.