

9. CONCLUSIONS AND RECOMMENDATIONS

- The rapid growth in population and haphazard urbanisation render Kathmandu Valley's environment and development extremely complex. To understand them and to arrive at solutions, planners and analysts need accurate data from different sources. GIS and RS technologies are methods that help integrate disparate sources of data and help analyse them to gain a realistic picture.
- There are numerous research and development studies on the Kathmandu Valley, but systematic organization and documentation of data and information have not been carried out. As a result much of the data and information are scattered. Each project studies certain aspects discretely in its own way, leading to different standards. Most of the studies do not pay adequate attention to designing and managing a database and their capability for doing so is weak.
- The spatial and temporal dimensions of data of the entire Kathmandu Valley are not available in the form needed by specific urban applications. The demand for accurate and homogeneous spatial data on Kathmandu Valley has been realised by government as well as research and development organizations.
- This study has tried a new approach to establish a core digital database of the Kathmandu Valley. It seeks to encourage a building block approach to development, management, and revision of databases in a complementary manner.
- The emergence of different satellites with high resolution capability provides the means to complement spatial data for urban environments, such as that of the Kathmandu Valley, at less cost than in the past. The study has established a sound topographic database of Kathmandu Valley with accompanying maps. It made as full a use as possible of remote-sensing images and integrated them into GIS.
- It is hoped that the Kathmandu Valley GIS Database will provide a foundation for research and development organizations, thus avoiding needless duplication in future. It is also intended to provide a source of reference for digital databases of the Kathmandu Valley for the many organizations working with GIS.
- The maps presented in this publication visualise and raise awareness about existing digital data. Therefore, to encourage and improve the exchange of information, the publication and database can be obtained in CD-ROM. The digital database can be made available to organizations at cost. (Please refer to Annex 5 of this publication.)
- The applications presented in this study will increase awareness about the usefulness of digital databases and demonstrate what can be achieved with GIS and related technologies. This is its purpose and it was not intended as a comprehensive application in itself.
- The study wishes to promote use of basic spatial datasets as common denominators for use by line agencies. Generally, more than 70 per cent of the cost involved in GIS goes to database development.
- The study hopes to sensitise senior executives and decision-makers about the need for a sound policy on database development and standards.
- The concept of a Spatial Data Infrastructure (SDI) is evolving - from the local, national, regional to global levels - for different GIS implementations. The SDI is

perceived as a mix, i.e., technology, policies, resources, and people, that brings access and responsible use of geospatial data under one umbrella.

- Today, GIS technology is seen as an infrastructure and the nature of GIS implementation has changed as organizations have seen the need to integrate with other information systems. The time has come to be proactive towards establishment of such an infrastructure if the investment in GIS is to be worthwhile.
- Organizations concerned with generation, sharing, and use of spatial data, such as national mapping agencies and relevant stakeholders, need to be prepared to adopt the technology. This calls forth for a new paradigm at the institutional and policy levels in order to provide the supportive services needed to ensure that the information derived meets user needs.
- At the national level, it is inevitable that efforts should be underway to formulate a strategy for a National Spatial Data Infrastructure (NSDI) in order to benefit from the prevailing GIS technology in a comprehensive manner.
- In using GIS and remote sensing to provide a basic spatial database of the Kathmandu Valley, the authors perceived that, in a concrete way, it would facilitate the establishment of a conducive environment and amenable infrastructure for spatial information in the Kathmandu Valley.