

GIS BASED TAXATION SYSTEM FOR HAPUTALE URBAN COUNCIL

M. A. A. L. Rupasinghe

Postgraduate Institute of Science, University of Peradeniya, Peradeniya, Sri Lanka

In the last decades as a consequence of increasing population and development, the society had become more complex. With the result of that, lands are becoming valuable and lacking resources. Then there were considerable *demand* for Geographical Information Systems (GIS) and its related topics. Nowadays several type of GIS development systems are introduced to decision making in the world. According to that various types of Geographical Information and Land Information Systems are prepared by the Survey Department of Sri Lanka in digital format. This information is useful for sustainable development of any country.

Haputale Urban Council area already has been mapped to represent information about the real world and the phenomenon. But the map cannot easily be analyzed, if there is no data retrieval service and there is no data sharing. All types of data have been recorded in papers in written form and they are organized in various systems of filing cabinets and drawers. Those unstructured data files are not suitable for large quantities of data or for the data that changes continuously. Hence, the amendment of data may be complex in a conventional filing system. Thus, decision making, exchange information and planning process are difficult. So they could not give efficient service for their customers. Hence traditionally information recording system was not capable enough to provide information readily.

For the effectiveness of Geographic Information Systems, it should be handled in a proper manner. Data should not be redundant and should be sharable within GIS application. The Data Base concept and data management system can be used if there are possibilities for application of GIS in this sector.

The main purpose of this study was to provide a user-friendly interface with a systematic database including spatial and non spatial data by using GIS tools to analyze taxation system of Haputale Urban Council. The study area was a semi urban area. The official records kept in a weak database and a weak controlling system at present.

Since there were much difficulties and weaknesses of the existing system, there should be a systematic database for easy manipulation of all the systems. By creating a user-friendly interface, it is easy to operate all the data systems and make decisions. The main data collecting process was done through field surveying. All detailed maps, scanned maps and drawings were used to collect spatial data. The main software used was ArcGIS. Visual Basic Editor in that software was useful for the programming. It helped to do this whole task easy. It has provisions to edit, delete, and manipulate all types of spatial and attribute data. In this report potential use of GIS tools for taxation purpose and data retrieving with high efficiency is discussed. A proposal is made for the decision makers to take into consideration when executing responsible action related to taxation.