From Our Members

GIS for Beginners

Introductory GIS Concepts and Hands-on Exercises
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Geographic Information Systems (GIS) are computer-based tools for mapping and analysing things that exist and events that happen around us. Our everyday decisions are dependent on this type of analysis. With the rapid growth of GIS and related technologies over the last two decades, GIS has become a vital element in maintaining and integrating geographic-based information. In today's information society, GIS technology is moving into the mainstream of the Information Technology (IT) industry and virtually influencing the way we deal with many of our problems. It helps us to solve problems such as locating a hospital or a facility, solid waste management, emergency vehicle routing, earthquake disaster mapping, real state business and many more.

GIS for Beginners has been prepared and published by the Mountain Environment & Natural Resources Information Systems Division of the International Centre for Integrated Mountain Development, in Kathmandu, Nepal, mainly for dissemination to schools and colleges for creating awareness in the field of Geographic Information Systems as well as to promote "geographic literacy" through GIS.

GIS software and the hardware required to operate it have become much more affordable and easy to use. This has resulted in the ability to develop GIS without making huge investments in software, hardware, and support staff; items that were once needed to implement them. GIS technology is rapidly reaching the public and their use is changing the way we access information and use it.

As GIS technology is taking hold in our society, it is important to create an awareness of the technology and educate the public. With ICIMOD's experience in the Hindu Kush-Himalayan (HKH) region, it has been observed that the popularity of GIS is growing rapidly.

The demand for GIS training and education is continually on the rise. It is important not only to train and educate scientists, professionals, and technicians but also to bring about awareness and educate policy makers, decision makers, school/college students, and the public.

This publication is intended to serve as introductory reading material on GIS to a wide-ranging audience. The publication introduces a collection of everyday problems from a spatial perspective and provides an overview of basic mapping concepts. It introduces basic GIS concepts and gives a brief overview of GIS and related technologies. It also introduces how GIS can be used to analyse complex problems and briefly discusses how to establish GIS. The hands-on exercises provide an interactive introduction to GIS, which is drawn along similar lines to the book "GIS for Everyone" published by Environmental Systems Research Institute (ESRI). The hands-on exercises provide a basic understanding of digital maps and how to interact with them. The exercises will help readers to answer basic geographic questions such as what, where, how far, and what's it like. The reader will learn to distinguish the difference between the dynamic nature of digital maps and static paper maps. All exercises are based on ESRI-ArcExplorer freeware software with local datasets. This publication with the CD-ROM can be used for a short training course.

We hope that the materials thus developed will be useful in promoting GIS technology in the region. Furthermore, the publication can be used as supplementary material in schools and colleges as an extension of geography and related courses.
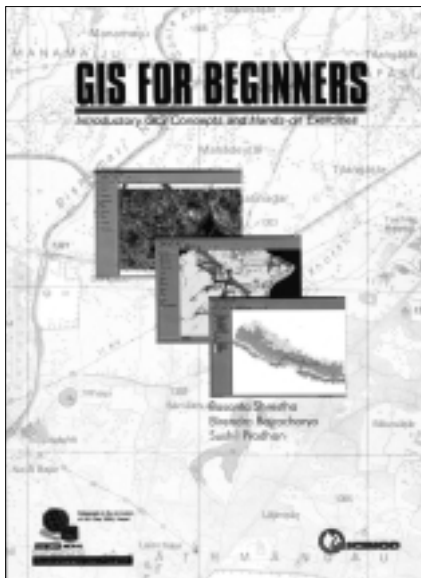
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