

NATIONAL SPATIAL DATA INFRASTRUCTURE – INDIAN PERSPECTIVE

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ABSTRACT

A new wave of technological innovation is allowing us to capture, store, process and display an unprecedented amount of geographical and spatial information about Society and a wide variety of environmental and cultural phenomena. Much of this information is “spatial” - that is, it refers to a coordinate system and is representable in map form. Current and accurate spatial data must be readily available to contribute to local, state and national development and contribute to economic growth, environmental quality and stability, and social progress.

India has, over the past years, produced a rich “base” of map information through systematic topographic surveys, geological surveys, soil surveys, cadastral surveys, various natural resources inventory programmes and the use of the remote sensing images. Further, with the availability of precision, high-resolution satellite images, data enabling the organisation of GIS, combined with the Global Positioning System (GPS), the accuracy and information content of these spatial datasets or maps is extremely high.

Encapsulating these maps and images into a National Spatial Data Infrastructure (NSDI) is the need of the hour and the emphasis has to be on information transparency and sharing, with the recognition that spatial information is a national resource and citizens, society, private enterprise and government have a right to access it, appropriately. Only through common conventions and technical agreements, standards, metadata definitions, network and access protocols will it be easily possible for the NSDI to come into existence.

India has now a NSDI strategy and the "NSDI Strategy and Action Plan" report has been prepared and is being opened up to a national debate. The first steps have been taken but the end-goal is farther away but in sight now. While Government must provide the lead, private enterprise, NGOs and academia have a major role to play in making the NSDI a reality. NSDI will require for coming together of various “groups” and harmonizing their efforts in making this national endeavor a success.

The paper discusses how the convergence of technologies is being startegised in NSDI – specifically of EO images and GIS technologies and how the nation would benefit from access to these datasets. The paper also discusses and illustrates with specific examples the techniques being developed and how the NSDI would support development efforts oin the country.