



NATIONAL SPATIAL DATA INFRASTRUCTURE

The National Spatial Data Infrastructure

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WHY DO WE NEED GEOSPATIAL DATA?

Government agencies and other organizations are frequently asked for quick responses to natural disasters, industrial accidents, environmental crises, and homeland security alerts. Much of the information needed to make sound decisions in such cases is based on geography. There is constant pressure to make wise decisions in a more cost effective and efficient manner. Accurate and current geospatial data are critical to these decisions.

HOW ARE GEOSPATIAL DATA MANAGED?

Geographic information systems (GIS) that facilitate spatial analysis play an increasing role in decision making at all levels of government and in private industry. GIS analyses, in turn, depend on the availability, quality, and compatibility of digital geographic data. Development of these data is normally the highest cost factor in the use of technology to address today's problems. Billions of dollars are invested annually in producing geospatial data. Many of these data collection activities are redundant—data already exist but they are hard to find, frequently undocumented, and in incompatible formats.

HOW CAN WE BENEFIT FROM WORKING TOGETHER?

Consistent, reliable means to share geospatial data among all users could result in significant savings for data collection, enhanced use of data, and better decision-making. In April 1994 President Clinton signed Executive Order 12906, calling for the establishment of the National Spatial Data Infrastructure (NSDI). The NSDI is seen as the technology, policies, and people necessary to promote geospatial data sharing throughout all levels of government, the private and non-profit sectors, and academia. In August 2002, the President's Office of Management and Budget issued revised Circular A-16, reaffirming the government's commitment to building the NSDI. The dictionary definition of the word infrastructure describes the major concepts around which the NSDI is designed.

infrastructure n. 1. An underlying base or supporting structure. 2. The basic facilities, equipment, services, and installations needed for the growth and functioning of a country, community, or organization. 3. A governmental or administrative apparatus.

The NSDI will provide a base or structure of relationships among data producers and users that will facilitate data sharing. The increased ability to share data through common standards and networks will, in turn, serve as a stimulus for growth.

MAKING THE NSDI A REALITY

The Federal Geographic Data Committee, established by the President's Office of Management and Budget to coordinate geospatial data activities, is charged with coordinating the development of the NSDI through three major activities:

- Establishment of a National Geospatial Data Clearinghouse, which is a distributed electronic network of data producers and users connected through the Internet.
- Development of standards for data documentation, collection, and exchange so that data can be shared across organizational and jurisdictional boundaries on many different hardware platforms and with many different software programs.
- Development of policies, procedures and partnerships to create a national digital geospatial data framework that would include important basic categories of data significant to a broad variety of users.

Both the Executive Order and the recent OMB Circular stress the importance of building partnerships to ensure effective development of the aforementioned efforts.

Building an effective NSDI will require a well-coordinated effort among Federal, tribal, State, local government, and academic institutions, as well as a broad array of private sector geographic, statistical, demographic, and other business information providers and users. Only through this cooperation will the NSDI become a reality.

HOW YOU CAN HELP

If you are a data producer or user, you can participate in the NSDI. Write or email the Federal Geographic Data Committee Secretariat for more information on NSDI activities or for ideas on how to become a part of the NSDI. If you would like to subscribe to the FGDC's free newsletter, please indicate this in your message. If you have access to the Internet, visit our home page at www.fgdc.gov

Related free publications available from the FGDC:

FGDC Fact Sheet

Clearinghouse Fact Sheet

Metadata Fact Sheet

The Value of Metadata Brochure

Metadata Workbook

Standards Fact Sheet

Framework Fact Sheet

Framework Report

Geospatial One-Stop Fact Sheet