Werk

Titel: The National PC-Atlas of Sweden

Autor: Bäärnhielm, Göran

Ort: Graz

Jahr: 1995

PURL: https://resolver.sub.uni-goettingen.de/purl?514854804_0005|log67

Kontakt/Contact

The National PC-Atlas of Sweden

GÖRAN BÄÄRNHIELM
Kunglige Biblioteket, Stockholm

The new National Atlas of Sweden is a set of 17 volumes presently being published in Swedish and English editions. The books cover various themes, e.g. mapping, forestry, population, infrastructure, environment, agriculture etc. They are produced by digital methods, so the contents can be made into a geographical database, accessible to a program for PC systems running under DOS or Windows: The National PC Atlas of Sweden.

The PC Atlas is intended to be an introduction to GIS (geographical information systems), to support the digital processing of maps and spatial data in schools and libraries, and to be a supplement to the Atlas books as well as being a stand-alone system.

The PC-Atlas = program + data sets + presentation ideas.

The presentation ideas, expressed in scripts, are ASCII-files which can be edited by the advanced user and which determine the selection of data and the display of them on the screen.

The data sets are in dBase format and the user can easily manipulate and add his own data.

The main functions are:
1) show data (vector maps, diagrams)
2) allow visual comparison of data from different sources
3) display time series
4) enable simple analyses (calculation of differences and ratios etc.)

The users are not expected to know anything about GIS, so simplicity rather than flexibility has been a guideline. There are three levels of sophistication:

The first is a simple 'read and browse' mode. It is based on readymade 'pages' which are turned over by clicking a button.

The second level is for the more advanced user who can change variables and areas, select diagram types, etc.

At the third level the user can modify the scripts controlling the program and make his own PC-Atlas.

There are mainly two types of maps: the base map and choropleth maps, both in vector format. Raster data can be handled by the program, but are not included at the present stage because of the large file sizes, which demand CD-ROM distribution. This means that hypsography, vegetation, etc., are not visualized.

The base map, called the 'place-name map', is the *National Atlas Map of Sweden*, scale 1:700,000. The user can select area and add or remove objects (e.g. roads, railroads, various typs of boundaries, lakes and rivers, etc). Cartographic data is managed as objects rather than in layers, so it can be easily adapted to different scales. The user can also measure distance and area, locate place-names, display coordinates, and search in the map catalogue. There is a test module for road planning. The map catalogue contains the official printed maps and charts of Sweden and also the annual national cartobibliography produced by the Royal Library. The user can select a specific map series or catalogue file and enter specific conditions for the various fields (e.g. a scale or year range, a code for the contents, etc). The search area can be defined as a square, a point or along a line, e.g. a road. The maps are represented as squares against the background of the base map and in a short list, and one can also view the catalogue entries. The principal advantage of the PC-Atlas for our library is a simple graphic interface for our map catalogue, if only for Swedish maps. The same would be desirable for other maps also, for example on the basis of the Digital Chart of the World.

However, the main purpose of the PC-Atlas is to display statistical data at the municipality, county and national levels on small scale maps. This is useful as a demonstration tool for the general public at the library, but it demands quite a lot of instruction. The advanced user can design his own maps by selecting data sets and combining them into choropleth maps or diagrams combined with maps. It is possible to export maps in the form of screen-dumps in Windows to be handled by an imaging program and pasted into a word-processor, as is demonstrated by the illustrations in this paper.

Examples of thematic maps as displayed in a demo

> Railroads - roads
> Built-up areas 1980
> Name search (dialect differences)
> Ownership of forests 1985-89 (Crown/other public/companies/private)
> Tree types, share of total timber volume 1985-89
> Timber volume total 1985-89
> Forest felling 1973-81, 1986-90, pie charts
> Employment corporate / private forestry

Effect of migration on age structure
Proportion of children to aged people
Population density, 1810-1990, historical series, agrarian / urban regions
Migration to and from urban regions 1990
Proportion of immigrants 1990
Acidification of groundwater
Lime-treatment of water against acidification
Arable land and agrarian enterprise
Active and inactive arable land
Effect of agrarian politics on landscape
Crops: Cereals / Pasture / Potatoes / Oil-plants / Peas / beans.
Regions of agriculture

The PC Atlas is distributed on floppies or CD-ROM at a price of SEK 3,500 for the parts already published or SEK 7,000 for the whole set.
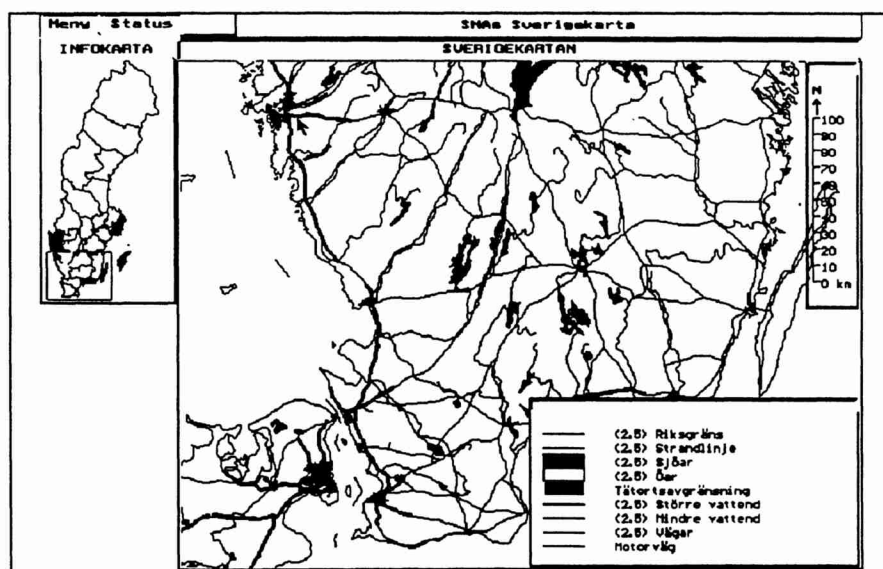

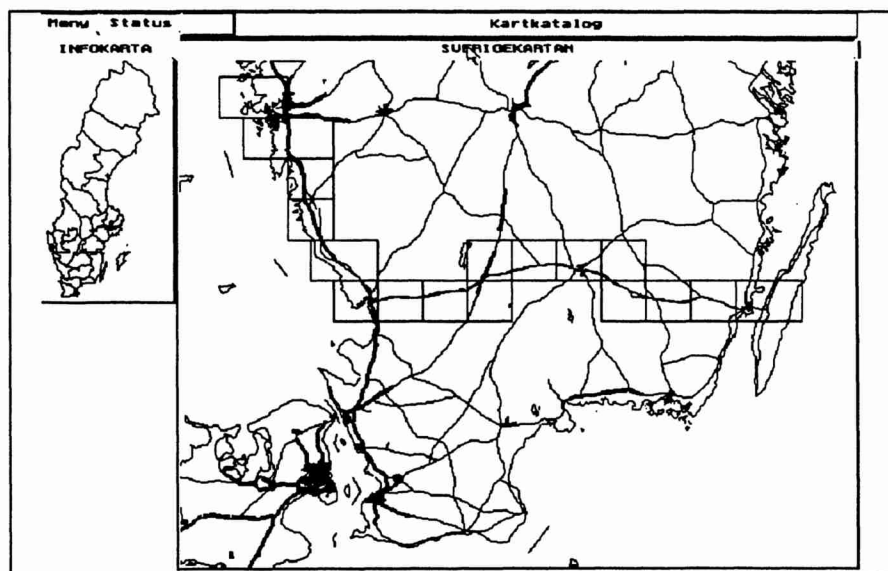Figure 1: Base map (without place-names)

Göran Bäärnhielm

Figure 2: Topo maps covering the road Gothenburg-Halmstad-Kalmar