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COMPREHENSIVE STUDY
□ ON
TOURISM DEVELOPMENT
□ IN
THE CENTRAL REGION OF
THE SOCIALIST REPUBLIC OF VIETNAM

DATABASE OPERATION MANUAL
GIS Database for Monuments Management
and Prevention in Hoi An Town

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**COMPREHENSIVE STUDY ON TOURISM DEVELOPMENT
IN
THE CENTRAL REGION OF THE SOCIALIST REPUBLIC OF VIETNAM**

**DATABASE OPERATION MANUAL
GIS Database for Monuments Management and Prevention
In Hoi An
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1. INTRODUCTION

1.1 Purpose of GIS Database Establishment

Now GIS is recognized powerful tool not only for management of town development but also for management of natural resources, business, health, education, state and local government, and so on.

GIS has various functions. Its main roles are presented dealing with geographic data from input and output. Following descriptions are basic functions of GIS.

- Collection: Integrating data from many sources dealing with geographic data (such as maps, aerial-photos, satellite images, GPS, etc.) and its attribute data (such as census data, socio-economic data, tourist statistics, etc.).
- Storage and management: All data has stored digital form in computer. GIS software such as ArcView, MapInfo is maintaining these data sets into database.
- Analysis: Querying data with particular attributes or geographic location and creating data from results of querying process.
- Display: Visualizing data in various ways (such as maps, graphs, and reports) for easy understanding.

1.2 Implementation Plan of GIS Database System

Final goal of GIS database system establishment is for management of town development related following agencies for conservation in Hoi An Town.

- Department of construction in Hoi An Town
- Hoi An Centre for Monuments Management and Preservation
- Town Planning Division in Hoi An Town
- Vietnam General Department of Hydrology and Meteorology
- Superior Administrative Agencies: Ministry of Culture and Information, National Center for Social Science and Humanities, and Urban Management Department, PC of Quang Nam Province

For reaching this goal, it is necessary to prepare GIS database step-by-step:

- Step 1: Establishing Digital Base Map, Scale of 1:2,000 (Figure 1)
- Step 2: Establishing GIS Database for Monuments Management and Preservation (Figure 1)
- Step 3: Establishing GIS Database Structure for Town Planning (Figure 2)
- Step 4: Providing GIS Database to Superior administrative Agencies (Figure 3)
- Step 5: Expansion and Integration of GIS Database system (Figure 3).

Figure 1 Establishing GIS database on the Step 1 and Step 2

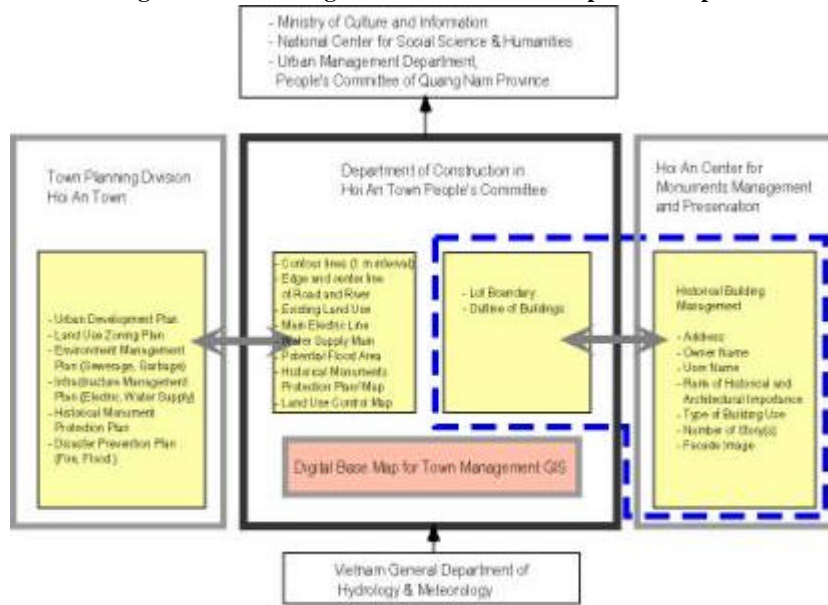


Figure 2 Establishing GIS database on the Step 3

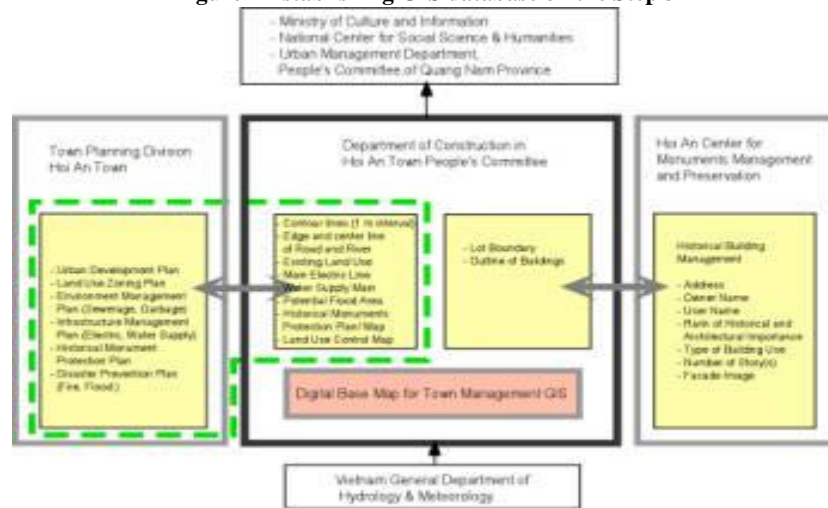
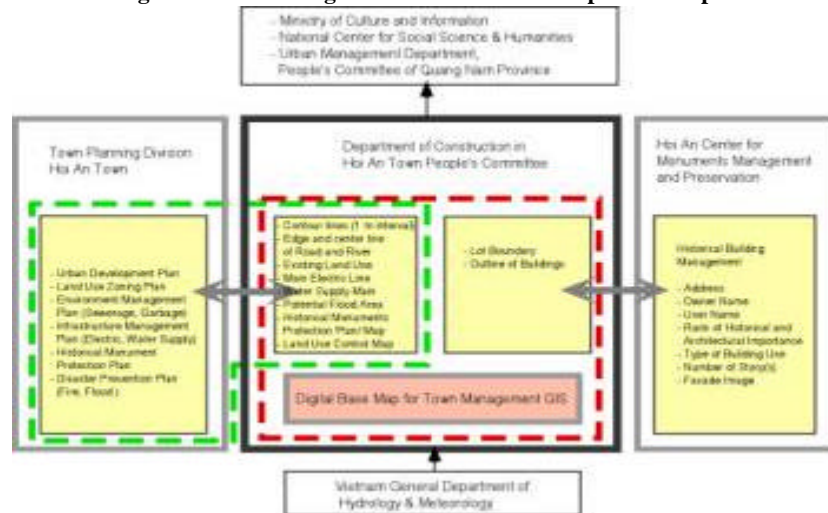


Figure 2 Establishing GIS database on the Step 4 and Step 5



Source: JICA Study Team

JICA Study Team carried out Step 1 and Step 2 completely to establish GIS database system for basic information.

1.3 About this Operation Manual

This operation manual supposed first user to work with ArcView GIS software. JICA Study Team tried to include figures and snapshot of each operation as much as possible. In the Section 2. Quick Start Tutorial, all users will be able to manipulate basic operation about ArcView GIS with GIS database of Hoi An District. In the Section 3. Querying Data, you will be able to find out data by the specified features with GIS database of Hoi An Old Town. Finally in the Section 4. How to update attribute data on the GIS database, two methods to modify will be presenting you.

2. QUICK START TUTORIAL

This section will guide you through your first few ArcView sessions. You probably have some basic tasks in mind that you'd like to do in ArcView, such as displaying a map, changing how it looks, using it to answer questions, and printing it. This tutorial shows you how to perform these tasks and put ArcView to work right away.

Exercise 1: Make and print a map of Hoi An District

You're writing a report about population of Hoi An District. You want to create map showing life expectancy in Hoi An District to illustrate your report.

In this exercise you'll see how to:

- 1) Open an existing ArcView project.
- 2) Choose which geographic features are displayed on a map.
- 3) Zoom in to an area you're interested in.
- 4) Label the feature displayed on a map.
- 5) Print out a map with a title, legend, scale bar, and north arrow.

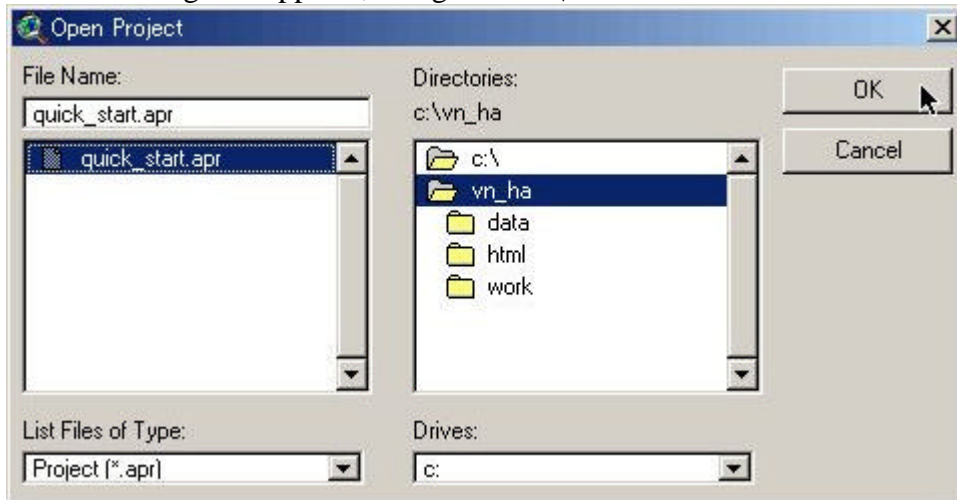
Open the ArcView project that contains the tutorial

1. Start ArcView. Click the "Open an existing project" radio button in the Welcome to ArcView dialog, then press OK.



A *project* is a file in which you store the work you do with ArcView. A project contains all the views, tables, charts, layouts, and scripts that you use for a particular ArcView application or set of related applications. In this way, your work is stored in one convenient place. Project file names have an .apr extension.

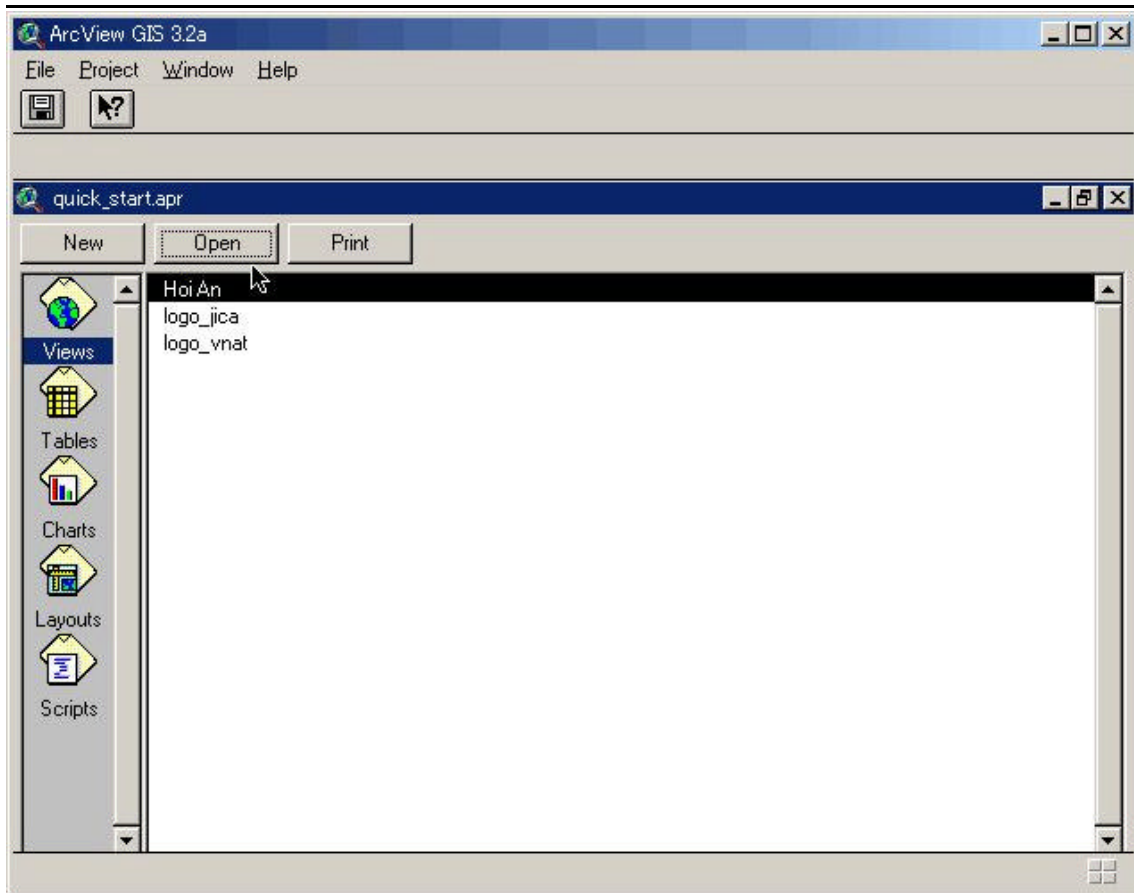
2. In the dialog that appears, navigate to 'c:\vn_ha'. Double-click the 'vn_ha' directory.



3. Select the project file called 'quick_start.apr' from the list on the left side of the dialog and press OK.

When the project opens, you'll see a window named 'quick_start.apr'. This is the *Project window*. The Project window gives you access to all the components contained in the project file. It also enables you to create new components.

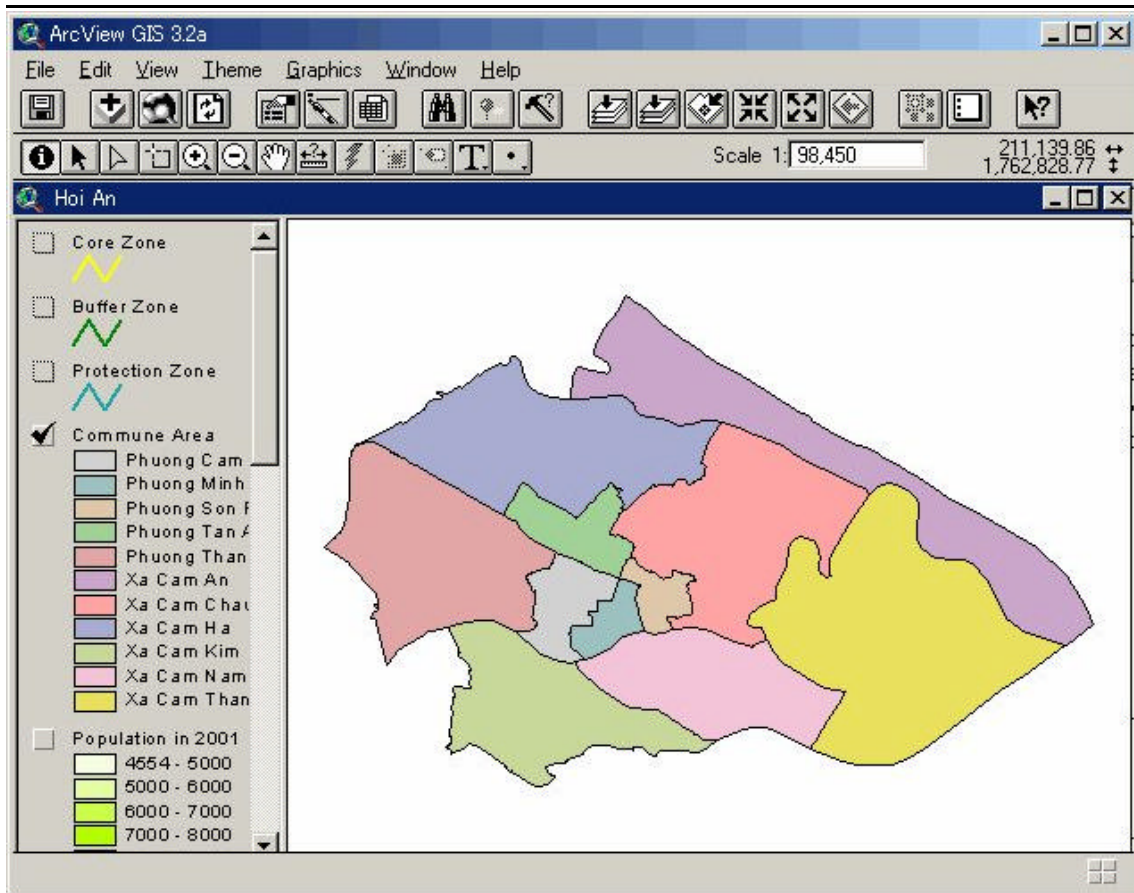
As you can see from the list in the Project window, quick_start.apr contains three views. A view is an interactive map that lets you display, explore, query, and analyze geographic data in ArcView.



Open the map of the Hoi An

4. Double-click the view called "Hoi An" in the list shown in the Project window.

The Hoi An map appears. This map shows the commune area in the Hoi An District.



A view is made up of layers of geographic information for a particular area or place. Each layer is a collection of geographic features, such as the protection zoning boundary (core zone, buffer zone, and protection zone), the administrative boundary (district, commune, and sub-commune), outline of building, contour line, bridge, road or river. In ArcView, these layers are called themes. In the Hoi An view in this exercise, following five themes present the same features, the Hoi An's communes, but they display different information about these features.

- 'Commune Area' theme
- 'Population in 2001' theme
- 'Annual Population Increasing Ratio in 2001' theme
- 'Population Density (person/km²) in 2001' theme
- 'Land Use in 1995' theme

All the themes in a view are listed to the left of the map in the view's *Table of Contents*. The Table of Contents also shows the symbols used to draw the features in each theme. The check box next to each theme indicates whether it is currently turned on or off in the map, that is, whether it is currently drawn on the map or not.

The order in which the themes are listed in the Table of Contents is also important. The themes at the top of the Table of Contents are drawn on top of those below it.

You can change the width of the Table of Contents by dragging the border between the Table of Contents and the map either left or right. This is useful if you want to increase the width of the Table of Contents so that you can see long theme names or long labels in a

theme's legend.

Draw the communes of the Hoi An District by population in 2001

5. In the view's Table of Contents, click the check box next to the theme called 'Commune Area' to turn it off.

6. Click the check box next to the 'Population in 2001' theme to turn it on.

