

# THE NATIONAL ATLAS OF SPAIN (1986-2008): FACSIMILE DIGITAL VERSION

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## Abstract

The National Atlas of Spain (SNA) is a powerful tool for the territorial knowledge of our country. The target audience are public administrations staff, private professionals, researchers, teachers, investors, students and general users interested in geographic issues or with Spanish general knowledge.

At the beginning of 2009, and to commemorate the more than twenty years of specialized work, it has published a digital facsimile edition of SNA thematic groups published as booklets from 1986 to present. This facsimile compilation supposes the close of a stage when it is going to begin the publication of a new edition of the National Atlas with other table of contents, format, layout and graphical design, and diffusion format. Especially with the publication of resources on Web through the National Atlas of Spain Information System.

This paper presents the facsimile digital version of the National Atlas of Spain 1986-2008 on DVD and web. (<http://www.ign.es/ign/es/IGN/ane.jsp>)

## 1.- Introduction

A National Atlas has a main functions in words of the Spanish cartographer F.V. Maure (1979): “ *The purpose of National Atlas is primarily to provide information on the various aspects of a country to those who must directly or indirectly make decisions on*

*how to solve that country's problems: governments, politicians, economists, sociologists, technicians and geographers. A National Atlas should provide a real, living picture of the country. Countries produce atlases to showcase their nation and a National Atlas should provide a real, living picture of the country”.*

The National Geographic Institute was entrusted with the preparation of the National Atlas of Spain by a resolution of the Spanish Council of Ministers, at its meeting of 13 June 1986.

The National Atlas consists of thirteen thematic sections divided into groups that were published both as independent booklets (also called fascicles) and into large format (6 volumes with more than 2,200 pages and over 4,500 maps in total). Its first edition was completed in 1997.

The Spanish National Atlas was produced with the involvement of various ministries and official organizations as well as the governments of Autonomous Regions and various specialists. These sources supplied the data required to make thematic maps representing the various aspects of territory and economy of Spain.



Figure 1: Publication formats of the National Atlas of Spain: volumes, booklets, and CD-ROM.

Since the Council of Ministers resolution of 1986, and in keeping with what is laid down in decree 1056/1995, and more recently in decree 1037/2009 , which specify as one of the functions of the General Direction of the National Geographic Institute of

Spain: “the production and updating of the National Atlas of Spain”, we have been updating information, making second and third editions of some booklets of the Atlas, and working on new lines of activity related to the National Atlas given arise to a new National Atlas. Among the products, it highlights the publication of several thematic groups such as electronic books (in PDF format, CD); Compendium series, which brings together some summary content of SNA to meet the needs of a specific segment of users; and Monographs Series.

The Department of National Atlas and Thematic Cartography is actively involved in training activities and dissemination of geographic culture undertaken by the National Geographic Institute. So in this line we have designed, developed:

- and taught several editions of e-learning courses: Geography for ESO (secondary school) and Thematic Cartography..
- two educational projects on the National Atlas of Spain website: ‘España a través de los mapas’ (Spain in maps) made in collaboration with the Spanish Geographers Association (<http://www.ign.es/espmmap>) and ‘La Población en España’ (Population in Spain) made in collaboration with the University of Zaragoza (<http://www.ign.es/pobesp/>).
- Spanish National Atlas Information System (SIANE); an innovative and development project that concerns with a new definition, development and maintenance of National Atlas of Spain.
- The cartographic visualizer called ‘Navegador Geográfico 2D/3D’.

This means that new products and services derived from ANE contents play now an important role (web services for data queries and map creation, elearning courses, educational resources, etc), finding in Internet an important communication channel.

## **2. - Methodology**

All the thematic groups of the National Atlas with its different editions (a total of 80 booklets) were scanning to the specification of 300dpi, and saved as TIFFs.

The studio workflow was colour managed throughout, with the colour profile embedded into each digital image and a colour target included to allow post production changes and correct printing/ matching. Files were then saved onto CDs for archival purposes and for the production of the application.

The application has been built with Flash technology (ActionScript is used primarily for the development of websites and software using the Adobe Flash) in two formats: DVD and Web. The facsimile digital atlas interface is familiar and usable and enables the user to browse and visualize any booklet of the National Atlas of Spain in its different

editions through a table of thematic groups (figure 2); inside each group through the different editions (figure 3) and inside each edition through the table of contents (figure 4).



Figure 2. Facsimile digital atlas. Dynamic index

In a first step the user selects one of the thematic groups of the National Atlas through a dynamic index that shows the covers of the different groups. In a second step, the application shows the table of contents of the selected thematic group with its different editions. This digital hyperlinked table of contents provides direct links to the pages of the selected thematic group.

GEOLOGÍA RELIEVE			
GRUPO 5-6	1ª Edición	2ª Edición	3ª EDICIÓN
<b>PRESENTACIONES</b>	<b>ÍNDICE</b>		
Presentación del Director General del Instituto Geológico y Minero de España	Geología (Texto explicativo)	Paleoicnología	
Presentación del Director General del Instituto Geográfico Nacional	Mapa geológico	Paleontología humana	
	Mapa tectónico	Relieve (Texto explicativo)	
	Cortes geológicos	Mapa geomorfológico	
	Escala de tiempo geológico	Representación cartográfica del relieve	
	Paleontología	Ortoimagen espacial	
	Fósiles de invertebrados	Mapa de pendientes	
<b>Intervinientes</b>	Fósiles de vertebrados	Modelo digital del terreno	
	Palcobotánica		
4 MENÚ			VOLVER

Figure 3. Table of contents of a thematic group

Pages can be “turned” in either direction in two ways: clicking the forward/back buttons in the toolbar, or going back to the digital hyperlinked table of contents. The images (raster files of each page of the different thematic groups) are of a high resolution and can be zoomed-in /out on, and it is easy to navigate. There are also other functionalities: full screen display, display at real resolution, save the atlas page on a file, cut out part of a page (not available on DVD version) and print it. (Figure 5 and figure 6)

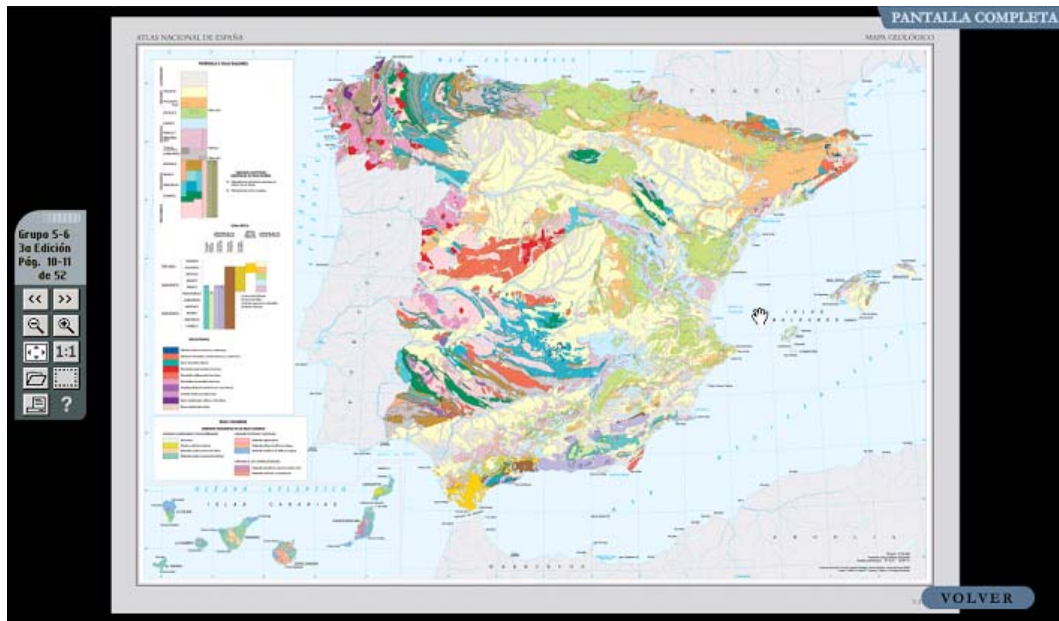


Figure 4. Visualization of an atlas page.



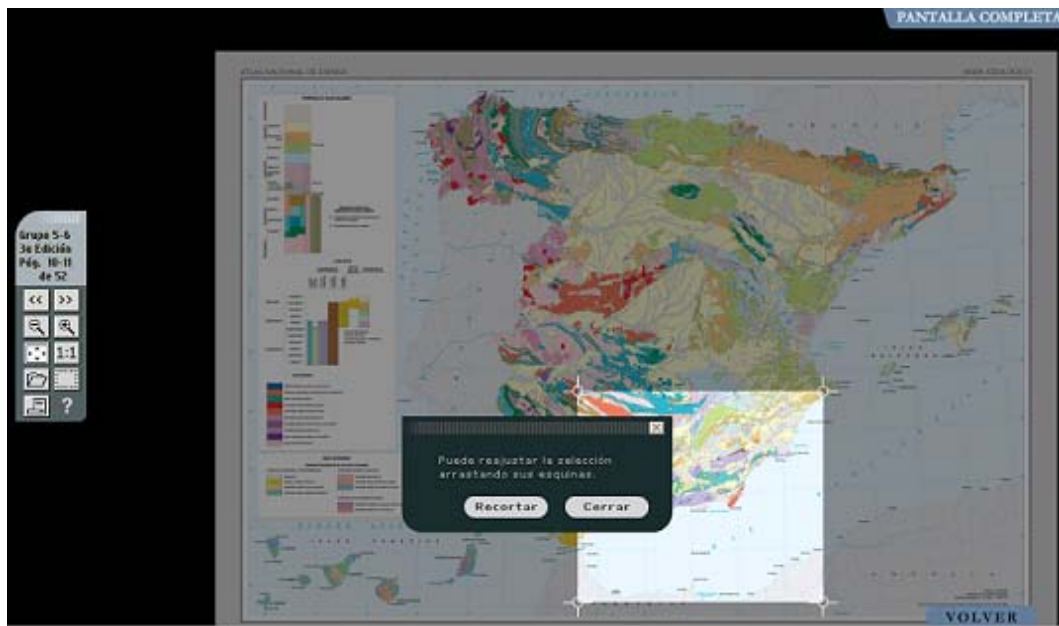


Figure 5. Visualization of a double page marking a portion for cutting of.

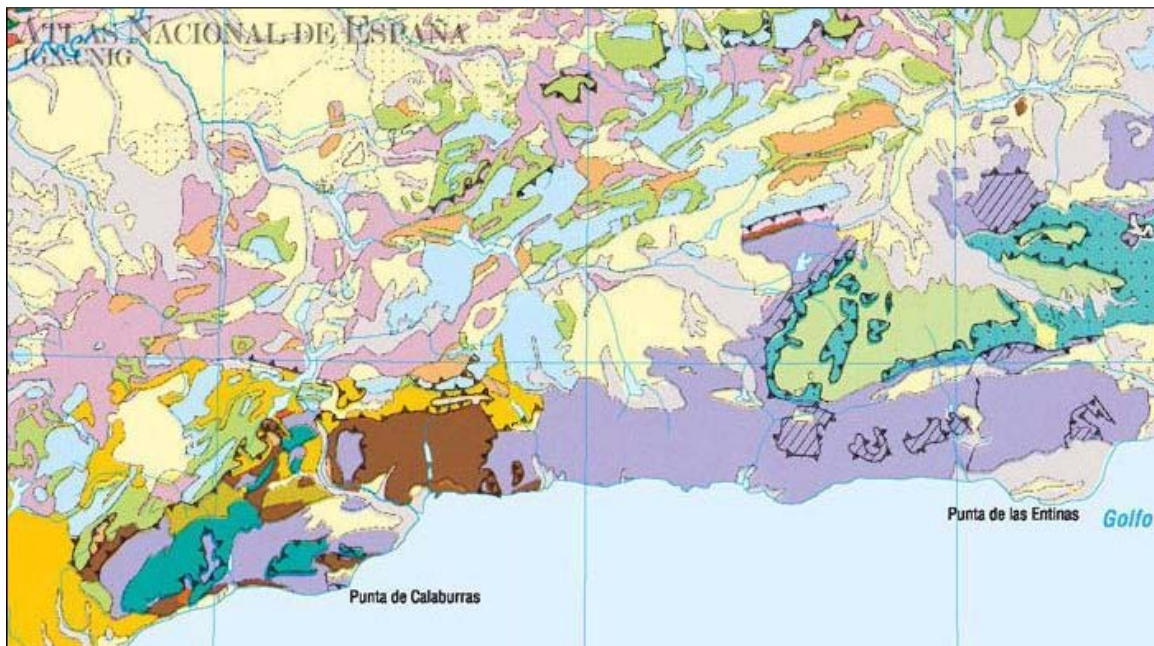


Figure 6. Cutting of a page with the watermark of the National Atlas in the upper left corner.

### 3.- System requirements

Minimum hardware requirements are a PC with, at least, 250 MB of memory, Windows (2000 or upper versions) or Mac OS X. Use of the online application requires download

of Flash plug-in within a standard web browser (Internet Explorer, Mozilla Firefox, Opera, etc).

#### **4.- Conclusions**

The National Atlas of Spain is an excellent work from a scientific and educational point of view. This compilation is the finishing touch to a brilliant stage in the history of the Spanish thematic cartography and offers a practice tool with possibilities for visualization, printing and saving as image any area selected by user. It has 3700 pages obtained in this period by the effort, dedication and illusion of a large group of cartographers.

In the future, the department of National Atlas wants to offer others facsimile digital version such as the National Atlas of 1955-1965 and the Geographical and Statistical Review of Spain.

#### **5.- References**

INSTITUTO GEOGRÁFICO NACIONAL (IGN, 2008 ): *Atlas Nacional de España 1986-2008: Grupos Temáticos*. Centro Nacional de Información Geográfica (CNIG), DVD.

INSTITUTO GEOGRÁFICO NACIONAL (IGN, 1991- ): *Atlas Nacional de España. Serie General del Atlas Nacional de España*. Centro Nacional de Información Geográfica (CNIG), 5vol.

AAVV (1912): *Reseña Geográfica y Estadística de España*, Dirección General del Instituto Geográfico y Estadístico, Ministerio de Instrucción Pública y Bellas Artes, Madrid.