INSTITUT CARTOGRÀFIC DE CATALUNYA

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NEWSLETTER INSTITUT CARTOGRÀFIC DE CATALUNYA

TOPOGRAPHIC ATLAS OF CATALONIA 1:50,000

Atles topogràfic de Catalunya 1:50 000
Institut Cartogràfic de Catalunya
2nd edition: Barcelona, September 2003
Price: 120 euros VAT incl.

In 2003, the ICC published the 2nd edition of the *Atles topogràfic de Catalunya 1:50 000* (topographic atlas). The first edition, which appeared in a smaller format in three volumes, was copublished with Enciclopèdia Catalana in 1995.

In this second edition the content and design have been renewed and updated. This atlas at 1:50,000 scale now covers a larger area outside Catalonia.

"THIS IS THE FIRST ATLAS THAT COVERS THE ENTIRE TERRITORY OF CATALONIA ON SUCH A DETAILED SCALE IN ONE SINGLE VOLUME"

It has a total of 280 pages, of which 185 are devoted to cartography. The toponymic index can be found on the last 74 pages.

"EACH DOUBLE PAGE COVERS AN AREA OF 450 SQ KM"

Thanks to the new format, a larger area is covered on each page, and there is an overlap which makes the atlas easier to read.

The changing and dynamic nature of the territory is accurately reflected by a topographic map or atlas, which shows the principal geographic features.

"IN ORDER TO PROCESS ALL THE INFORMATION, IT HAS BEEN STRUCTURED INTO THEMATIC LAYERS"

The content is drawn from the ICC's topographic database 1:50,000 and provides information about:

- Altimetry: The relief is represented by contour lines, peak heights, spot heights and mountain shading. The contour lines are at 20-meter intervals.
- Land uses: These correspond to woods; to scrubland, meadows and thickets, and to grassy areas above the tree line.
- Planimetry: This comprises a number of land surface features which are represented and symbolized in a particular way: hydrography (fluvial network, marshes, lakes...), populated areas (buildings, towns and villages, road network, installations and facilities...), administrative boundaries (municipal and regional divisions) and boundaries of protected areas (national and natural parks, natural areas of national interest and other areas subject to the *Pla d'Espais d'Interès Natural* –plan for areas of natural interest).

The UTM projection grid and the toponymic information are also shown.

The toponymic index contains approximately 60,000 entries: For each entry, the type of toponym, its comarca (administrative division in Catalonia), the atlas page and the UTM coordinates of its position are all specified.

The atlas also includes a short text about its presentation and arrangement, and about the general legend, which aids interpretation of the conventional symbols employed.

This is an atlas which is easy to consult, due to its size, the graphic reinforcement of the elements that make up the landscape and its toponymic index. A publication of cartographic quality and precision, it is aimed at the general public, as well as professionals and specialists.

SUMMARY

This newsletter is a free publication available in Catalan, Spanish and English.

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Generalitat de Catalunya
Institut Cartogràfic de Catalunya

BIG ROAD ATLAS OF CATALONIA 1:50,000

Gran atles de carreteres de Catalunya 1:50 000
Institut Cartogràfic de Catalunya and GeoEstel
1st edition: Barcelona, September 2003

In 2003, the ICC and GeoEstel published the *Gran atles de carreteres de Catalunya 1:50 000*.

A by-product of the *Atles topogràfic de Catalunya 1:50 000*, this atlas highlights information about the roads, which was updated in May 2003. In addition to the road and rail networks, it shows the distances in kilometers between specific points, including intermediate points, and the routes of the GR footpaths. Other planimetric elements represented are: towns and villages, tracks, hydrographic network, etc., which, together with the mountain shading to represent the relief, are all features of this first road atlas at 1:50,000 scale to be produced by the ICC.

The atlas shows the entire territory of Catalonia in a single volume measuring 29.5 x 39 cm. It contains 185 pages of cartography and a toponymic index of 74 pages.

The toponymic index has 60,000 entries. For each entry, the type of toponym, its *comarca* (administrative division in Catalonia), the atlas page and the UTM coordinates of its position are all specified.

The atlas has both a general legend and a specific one, which explains the conventional symbols used for the communications network in several languages: Catalan, Spanish, English, French, German and Italian.

This publication is easy to use, thanks to the graphic reinforcement of the territorial elements and the way in which the toponymic index is set out.

NEW PHOTOGRAMMETRIC AIRPLANE FOR THE ICC

In the meeting no. 49, the Governing Council of the ICC authorized the replacement of the Partenavia P-68 airplane, in service since 1984, a measure planned on account of its evident operational limitations with respect to its age and the difficulties posed by loading the new sensors employed by the ICC. Before making this replacement, the Institute conducted an exhaustive market survey with a view to selecting the airplane that would best suit its working needs.

"THE ICC HAS ACQUIRED A CESSNA CARAVAN 208B TO REPLACE THE PARTENAVIA P-68"

Finally, for technical reasons, the Cessna Caravan 208B model was chosen, which offers a service ceiling of 23,700 feet (aprox. 7,000 m), a cruising speed of 330 km/h, considerable autonomy, power and stability, great flexibility in terms of its cabin capacity and useful load, and low operation and maintenance costs. The ICC purchased this airplane in April 2003 and it arrived in Barcelona in January 2004.

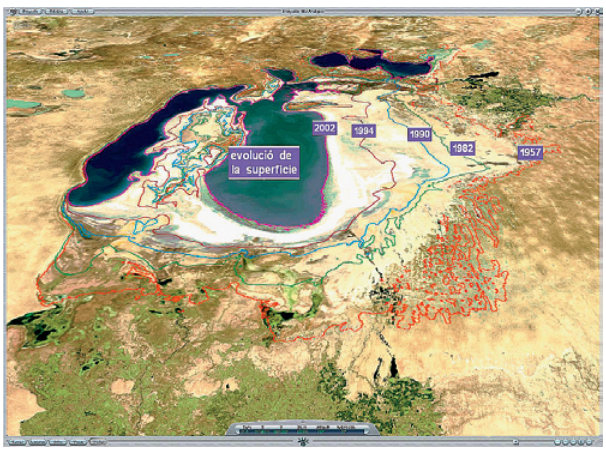
RESEARC

THE ICC'S CONTRIBUTION TO THE FORUM 2004

In October 2003, the ICC and the Fòrum Universal de les Cultures Barcelona 2004, SA signed an agreement to collaborate in the exhibition "Inhabiting the world".

As well as advising on the selection of remote sensing images obtained over urban environments, the ICC has processed a dozen images to provide a dynamic illustration of two cases that highlight the interaction of man and the biosphere: the development of thick clouds of pollution in Asia, and the movement of large ice floes in the Antarctic.

Furthermore, using the GeoShow3D application, the ICC has produced two videos: the first on the process of desiccation of the Aral Sea due to the agricultural use of the tributary rivers, which has led, to date, to the loss of more than 60% of its water volume; and the second on the future flooding of the Yangtze River basin as part of the Three Gorges Dam project, which will create a reservoir more than 600 km long, covering 19 towns, 326 villages and more than 30,000 ha of agricultural land, and forcing two million people to move away.



EVALUATION OF T OF AN OCEAN BOT

In November 2003, the Spanish Ministry of Science and Technology approved the financing of the project "Evaluation of the detection threshold of a permanent broadband ocean bottom seismograph (Ocean Bottom Seismometer, OBS) for the study of seismicity and seismic risk. Application to the coastal area of Catalonia". The ICC, the Observatori de l'Ebre and REPSOL are all taking part in this project.

The project includes the development and implementation, for the very first time in Spain, of a permanent OBS system that forms part of a real-time seismic monitoring network, in this case the seismic network of the ICC, which is based on data transmission via satellite.

With the help of the OBS records, it will be possible to review the crustal structure model, improve hypocenter location (gaining more accurate knowledge of local and regional seismicity), study the evolution of seismicity in space and time, and finally, make a first evaluation of the possible

The Cessna is equipped with modern avionics instruments which ensure both the precision required for photogrammetric flights and the highest crew safety standards.

"THE NECESSARY MODIFICATIONS HAVE BEEN MADE TO THE AIRPLANE IN ORDER TO ADAPT IT TO THE NEEDS OF THE SENSORS AND THE CAMERAS"

The structure of the Caravan 208B has been suitably modified to allow fitting of the working equipment for the purpose of the tasks that it will be expected to perform. These changes basically consist in preparing two holes for photogrammetric cameras, aligned with the aircraft axis, and a third hole for fitting the CASI, LIDAR and other sensors. A GPS antenna has also been fitted in a position perpendicular to each of the holes.

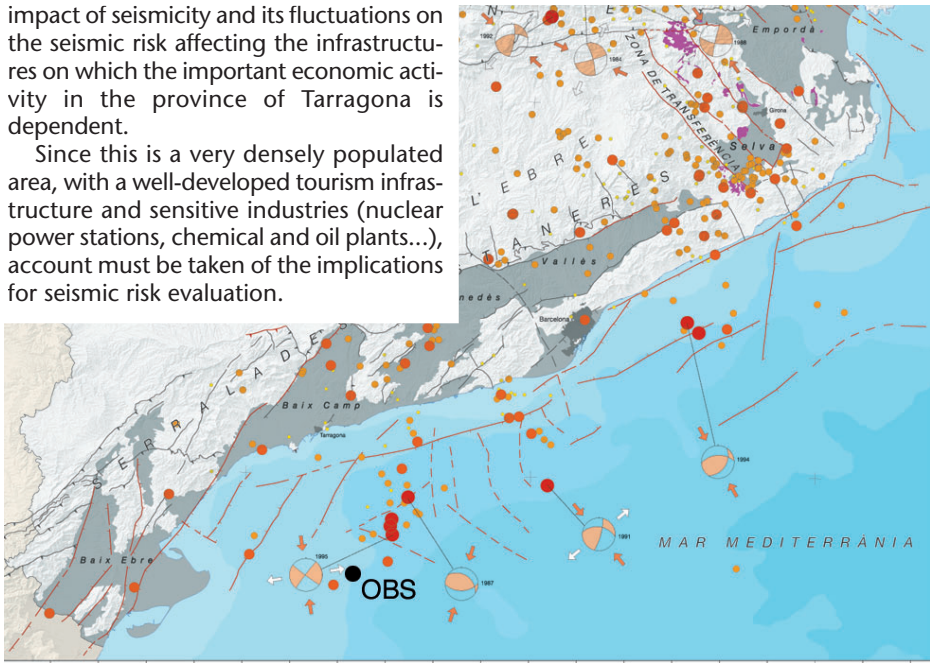
We hope that this new and important equipment will enable the ICC to maintain the high standards it has set in primary data capture.

CH AND DEVELOPMENT

HE DETECTABILITY TTON SEISMOGRAPH

impact of seismicity and its fluctuations on the seismic risk affecting the infrastructures on which the important economic activity in the province of Tarragona is dependent.

Since this is a very densely populated area, with a well-developed tourism infrastructure and sensitive industries (nuclear power stations, chemical and oil plants...), account must be taken of the implications for seismic risk evaluation.



NEW

NEW BOOKS ON TOPONYMY

Noms de lloc, llinatges i renoms de l'Argentera
1st edition: Barcelona, July 2003
Onomàstica de Fulleda
1st edition: Barcelona, January 2004
Institut Cartogràfic de Catalunya and Societat d'Onomàstica
Price: 13,22 euros VAT incl.

With the aim of publicizing the compilations of the toponymy of various towns and villages in Catalonia, in July 1991 the Institut Cartogràfic de Catalunya and the Societat d'Onomàstica signed a framework agreement to establish how these works were to be circulated.

Since then, various books that compile toponymy have been published, the last two being: *Noms de lloc, llinatges i renoms de l'Argentera* (July 2003), by Enric Prats Auqué, and *Onomàstica de Fulleda* (January 2004), by Santi Arbós Gabarró.

These two books contain a list of all the present and bygone toponyms compiled by the respective authors.

"THE TOPONYMS CITED ORIGINATE BOTH FROM ORAL INFORMERS AND CONSULTATION OF VARIOUS ARCHIVES AND LIBRARIES"

For each of the toponyms, reference is made to the document and the year in which the name is first found in writing, and then there is a short description of the type of toponym and where it is situated.

Furthermore, two maps are included at the end of the books: a topographic map of the municipal area and another of the center of the village or town.

Including these last two books, a total of eight have been published. A ninth is about to appear devoted to Granera, written by Enric Garcia-Pey.

These publications are aimed at the general public who are interested in learning about the origins of the place-names of Catalonia.

BRIEF NOTES

"NARCÍS MONTURIOL" AWARD FOR THE ICC

In October 2003, the Generalitat de Catalunya (autonomous government) presented the ICC with the "Narcís Monturiol" Award for merit shown in the field of science and technology.

These awards were created in 1982 to honor those individuals and entities who through their work have made an outstanding contribution to the scientific and technological progress of Catalonia.

FEDER SUBSIDIES FOR TWO DEVELOPMENT PROJECTS

In 2003, the ICC, together with the organizations involved, received two subsidies from the European Union FEDER fund (INTERREG II program) to undertake the following research and development projects:

ISARD (Automatic earthquake damage assessment), the aim of which is: *a)* the unified transfrontier seismic zoning of the Pyrenees; *b)* damage scenarios for two pilot zones: Andorra and la Cerdanya; *c)* automatic and rapid damage assessment without the distorsion that the Spanish-French border can cause. It is planned to install 3 accelerographs in France, 2 seismic stations in Catalonia and 1 accelerograph in Andorra, and to fine-tune the automatic damage estimation system. This project will be undertaken during the years 2003-2006.

EURMET (Urban expansion of metropolises in south-west Europe), which aims to identify the new perimeters of urban areas on the basis of spatial organization and economic and social content by analyzing SPOT-5 images of 10 European cities (including Barcelona). This project will be undertaken during the years 2003-2005.

START OF THE GEOLAND PROJECT

In January 2004, the Geoland project was started, a project in which 56 partners from 14 European countries are taking part, including the ICC.

This is a remote sensing project financed by the VI Framework Program of the European Union in the field of aeronautics and space priority (GMES Subprogram, Global Monitoring of Environment and Security).

The aim of Geoland is to develop geoinformation products and services, in order to provide support for the GMES Subprogram. To be specific, the Geoland products and services are oriented towards the control and management of land and vegetation cover, and they will be designed to ensure the sustainability, accessibility, reliability and economic efficiency required by the public authorities responsible for environmental management.

The principal task of the ICC in this project is to analyze the needs of end users in Spain, to present them with the land and vegetation use management systems developed in Europe, and to ascertain whether these are suitable for their needs.

THEMATIC NETWORK OF PHYSICS, GEOLOGY AND ENGINEERING OF EARTHQUAKES

In 2001 the Thematic Network of Physics, Geology and Engineering of Earthquakes was established. The forerunner of this network was the Thematic Network of Seismology and Seismic Engineering coordinated by the ICC during the years 1995-2000.

The renewal of assistance from the Departament d'Universitats, Recerca i Societat de la Informació (DURSI) for the new Network, also coordinated by the Institute, was granted for the period of November 2003-November 2005.

The Thematic Network of Physics, Geology and Engineering of Earthquakes is formed by the following working groups:

– Grup de Sismologia, Institut Cartogràfic de Catalunya.
– Grup de Recerca de Sismologia i Enginyeria Sísmica, Universitat Politècnica de Catalunya.
– Observatori Fabra.
– Observatori de l'Ebre.
– Física de la Terra, Universitat de Barcelona.
– Grup d'Estudi de Moviments Corticals Recents, Universitat de Barcelona.
– Física de los Terremotos y sus Efectos, Institut Jaume Almera (Consejo Superior de Investigaciones Científicas).
– Sismologia estructural, Institut Jaume Almera (Consejo Superior de Investigaciones Científicas).

The aim of the Network is to find ways in which to streamline the circulation of ideas and the results of research in progress between the groups in the Network, and to enhance the planning of joint and individual research in the field of Physics, Geology and Engineering of Earthquakes to be undertaken by these groups in the future.

To this end, conferences and working meetings have been organized. During the first period (2001-2003), 10 events were held.

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