Country Profile: China

Country Profile (PDF)

Country Resources

Topographic

Series	Publisher	Scale	Years	Sheets
EVGmap 1000 North Korea Vector Data	East View Geospatial	1:1,000,000	2008 – 2008	4
VMAP0 1:1,000,000 Scale Vector Data	National Imagery and Mapping Agency	1:1,000,000	1992 – 1992	4
Nepal 1:50,000 Scale Topographic Maps	Nepal Survey Department	1:50,000	1996 – 2001	115
Kyrgyzstan 1:200,000 Scale Topographic Maps (English)	State Service of Geodesy and Cartography of Kyrgyz Republic	1:200,000	2002 – 2002	4
Kyrgyzstan 1:200,000 Scale Topographic Maps (Russian)	State Service of Geodesy and Cartography of Kyrgyz Republic	1:200,000	2002 – 2003	18
Hong Kong 1:20,000 Scale Topographic Maps	Survey & Mapping Office, Land Department	1:20,000	2001 – 2003	16
Hong Kong 1:50,000 Scale Topographic Maps	Survey & Mapping Office, Land Department	1:50,000	1999 – 1999	2
Global AMS 1:250,000 Scale Topographic Maps (1940's)	United States Army Map Service	1:250,000	1944 – 1949	868
China 1:1,000,000 Scale Topographic Maps (English/Pinyin)	Xi'an Cartographic Publishing House	1:1,000,000	1991 – 1991	15
China 1:1,000,000 Scale Topographic Maps (Chinese)	Zhongguo Ditu Chubanshe / China Cartographic Publishing House	1:1,000,000	1997 – 1997	77

Nautical

Series	Publisher	Scale	Years	Sheets
China Nautical Charts (All Scales)	The Navigation Guarantee Department of the Chinese Navy Headquarters	Varies	2007 – 2023	596

Geoscientific

Series	Publisher	Scale	Years	Sheets
China 1:200,000 Scale Antimony Geochemical Maps	China Geological Survey	1:200,000	–	2
China 1:200,000 Scale Arsenic Geochemical Maps	China Geological Survey	1:200,000	–	2
China 1:200,000 Scale Bismuth Geochemical Maps	China Geological Survey	1:200,000	–	2
China 1:200,000 Scale Copper Geochemical Maps	China Geological Survey	1:200,000	–	2
China 1:200,000 Scale Gold Geochemical Maps	China Geological Survey	1:200,000	–	2
China 1:200,000 Scale Lead Geochemical Maps	China Geological Survey	1:200,000	–	2
China 1:200,000 Scale Molybdenum Geochemical Maps	China Geological Survey	1:200,000	–	2
China 1:200,000 Scale Silver Geochemical Maps	China Geological Survey	1:200,000	–	2
China 1:200,000 Scale Tin Geochemical Maps	China Geological Survey	1:200,000	–	2
China 1:200,000 Scale Tungsten Geochemical Maps	China Geological Survey	1:200,000	–	2
China 1:200,000 Scale Zinc Geochemical Maps	China Geological Survey	1:200,000	–	2
China 1:250,000 Geological Maps	China University Geological Press	1:250,000	2010 – 2014	70
Japan 1:2,000,000 Scale Volcanic Geology Map	Chishitsu Chosa Tokoro / Geological Survey of Japan	1:2,000,000	1981 – 1981	1
North Vietnam 1:500,000 Scale Series 1963 Geological Maps	Địa chất và Khoáng sản biển (GEOLOGY AND MINERAL RESOURCES)	1:500,000	1963 – 1963	4
Tectonic Map of North Vietnam 1:2,000,000 Scale	Địa chất và Khoáng sản biển (GEOLOGY AND MINERAL RESOURCES)	1:2,000,000	1963 – 1963	1
China 1:2,500,000 Scale Geological Map (6 sheets)	Dizhi Chubanshe / Geological Publishing House	1:2,500,000	2005 – 2005	1
China 1:2,500,000 Scale Quaternary Geological Map (9 sheets)	Dizhi Chubanshe / Geological Publishing House	1:2,500,000	1990 – 1990	1
China 1:4,000,000 Scale Geological Map (2 sheets)	Dizhi Chubanshe / Geological Publishing House	1:4,000,000	1977 – 1977	1
China 1:5,000,000 Scale Metallic Resources Map	Dizhi Chubanshe / Geological Publishing House	1:5,000,000	1992 – 1992	1
China 1:5,000,000 Scale Mineral Resources Map	Dizhi Chubanshe / Geological Publishing House	1:5,000,000	1992 – 1992	1
China 1:5,000,000 Scale Nonmetallic Resources Map	Dizhi Chubanshe / Geological Publishing House	1:5,000,000	1992 – 1992	1
Nepal 1:1,000,000 Scale Geological Map	HMG Department of Mines and Geology	1:1,000,000	1994 – 1994	1

Mongolia 1:1,000,000 Scale Geological Maps	Mineral Resources Authority of Mongolia-Geological Office	1:1,000,000	2001 – 2002	14
Mongolia 1:1,000,000 Scale Tectonic Maps	Mineral Resources Authority of Mongolia-Geological Office	1:1,000,000	2002 – 2002	14
China 1:200,000 Scale Geological Maps	National Geological Archive	1:200,000	1962 – 2002	328
Kyrgyzstan 1:500,000 Scale Geological Map – Metallogenic	Soviet Union Glavnoe upravlenie geodezii i kartografii	1:500,000	1988 – 1988	10
Kyrgyzstan 1:500,000 Scale Geological Maps – Engineering	Soviet Union Glavnoe upravlenie geodezii i kartografii	1:500,000	1989 – 1989	10
Kyrgyzstan 1:500,000 Scale Geological Maps – Formations	Soviet Union Glavnoe upravlenie geodezii i kartografii	1:500,000	1988 – 1988	10
Kyrgyzstan 1:500,000 Scale Geological Maps – Geomorphology	Soviet Union Glavnoe upravlenie geodezii i kartografii	1:500,000	1989 – 1989	10
Kyrgyzstan 1:500,000 Scale Geological Maps – Oil and Gas	Soviet Union Glavnoe upravlenie geodezii i kartografii	1:500,000	1986 – 1986	10
Kyrgyzstan 1:500,000 Scale Geological Maps – Recent Tectonic	Soviet Union Glavnoe upravlenie geodezii i kartografii	1:500,000	1988 – 1988	10
Kyrgyzstan 1:500,000 Scale Geological Maps – Seismotectonic	Soviet Union Glavnoe upravlenie geodezii i kartografii	1:500,000	1988 – 1988	10
Kyrgyzstan 1:500,000 Scale Geological Maps – Tectonic	Soviet Union Glavnoe upravlenie geodezii i kartografii	1:500,000	1989 – 1989	10
Global AMS 1:250,000 Scale Geological Maps	United States Army Map Service	1:250,000	1953 – 1965	130

Thematic

Series	Publisher	Scale	Years	Sheets
The 2004 China Economic Census Data with ZIP Maps	CDC	1:1,000,000	2004 – 2004	32
The World 1:30,000,000 Scale Topographic Map Series 1145 (NGA)	DMA	1:30,000,000	–	2

Global Census Archive: GIS Census Data

Year	Questions	ADM Level	Polygons at ADM	Data Points
2010	5	4	43,564	479,204

Global Resources

Topographic

Series	Publisher	Scale	Years	Sheets
Soviet Military City Plans	Voenno-topograficheskoe upravlenie General'nogo shtaba (Soviet Union)	Varies	1944 – 2003	3017
Soviet Military 1:100,000 Scale Topographic Maps	Voenno-topograficheskoe upravlenie General'nogo shtaba (Soviet Union)	1:100,000	1947 – 1999	24897
Soviet Military 1:200,000 Scale Topographic Maps	Voenno-topograficheskoe upravlenie General'nogo shtaba (Soviet Union)	1:200,000	1949 – 2009	17799
Soviet Military 1:500,000 Scale Topographic Maps	Voenno-topograficheskoe upravlenie General'nogo shtaba (Soviet Union)	1:500,000	1953 – 1998	3093

Nautical

Series	Publisher	Scale	Years	Sheets
NGA Nautical Charts POD Certified (All Scales)	National Geospatial-Intelligence Agency	Varies	1943 – 2013	4517

Aeronautical

Series	Publisher	Scale	Years	Sheets
Joint Operations Graphic (JOG) 1:250,000 – Aeronautical	Defence Mapping Agency	1:250,000	1958 – 2007	4204
Tactical Pilotage Chart (TPC) 1:500,000 Scale – Aeronautical	Defence Mapping Agency	1:500,000	1967 – 2006	598
Operational Navigation Chart (ONC) 1:1,000,000 Scale – Aeronautical	Defence Mapping Agency	1:1,000,000	1969 – 2001	243
Jet Navigation Chart (JNC) 1:2,000,000 Scale – Aeronautical	Defence Mapping Agency	1:2,000,000	1971 – 1999	117
Global Navigation and Planning Chart (GNC) 1:5,000,000 Scale – Aeronautical	Defence Mapping Agency	1:5,000,000	1981 – 1999	27

Geoscientific

Series	Publisher	Scale	Years	Sheets
Soviet Military 1:1,000,000 Scale Topographic Maps	Voenno-topograficheskoe upravlenie General'nogo shtaba (Soviet Union)	1:1,000,000	1948 – 1994	1089

Note: East View Geospatial is continuously sourcing new resources that may not yet be listed in Global Explorer. Please contact us if you have geodata needs beyond what is listed above and we will be happy to discuss available off-the-shelf and custom solutions.

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Historical Country Mapping Information

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Country Profile (PDF)

Topographic

Since 1956 the national survey authority in the People's Republic of China has been the **National Bureau of Surveying and Mapping** (**NBSM**). It is responsible for geodetic, photogrammetric and gravimetric surveys, compiles and publishes official mapping of the country and directs the work of mapping agencies in China. These comprise national civilian and military map producers, and cartographic research agencies such as the **Chinese Academy of Surveying and Mapping**. **NBSM** also coordinates the work of a wider variety of surveying and mapping organizations in different national ministries, and also at provincial and municipal levels across the country.

Mapping standards were set between 1956 and 1978, when a new triangulation of China was established based upon the Beijing coordinate system, and when new levelling based upon the Jingtao datum was fixed. Map specifications followed Soviet practice, series were on the Gauss cylindrical projection, Krassovsky ellipsoid, with sheet lines and numbering conforming to the IMW system, and symbolization also followed Russian styles, with relief shown by 5 m, 10 m or 20 m contours for plains, hills and mountains. These programs resulted in the publication of modern photogrammetric topographic coverage of the whole country. 1:25,000 maps were the basic scale for major industrial and urban centers, 1:50,000 was used for all other densely populated and developed areas, with 1:100,000 scale mapping of deserts and mountainous areas. Complete 1:100,000 scale coverage was reached in 1969, and derived from 1:60,000 scale aerial photography; the 1:50,000 map was derived from 1:40,000 scale aerial photographs and finished in the 1970s. After the upheavals of the cultural revolution a continuous revision program was instituted for the three basic scales, using a combination of photogrammetry and field checking. In 1991 it was decided to establish a new economic edition of the 1:50,000 map, with the publication of line maps, image maps, landform-type maps, land use status maps and a digital specification for international exchange.

A 1:200,000 map was completed in 1970, and 1:500,000 scale coverage in 227 sheets was finished in 1980. In 1984 it was decided to replace the 1:200,000 scale series with 1:250,000 mapping, the 781 sheets required to cover China were published by 1991, and a program to derive a new edition of 1:500,000 sheets started in 1988.

Following completion of the first edition of the basic scale mapping increasing effort has been given to large-scale surveys of the country. A 1:10,000 scale program was started in 1970 to cover developed eastern areas, with 1 m, 2 m and 5 m contours, while urban areas are mapped at 1:5,000, 1:2,000, 1:1,000 and 1:500 scales. About 20,000 of these sheets were produced a year in the early 1990s.

The first edition of a Chinese 1:1,000,000 scale map was completed in 1958, and subsequently a second edition incorporating data from satellite imagery was completed in 1983. The latest edition of this map is the best available Chinese topographic mapping and was issued between 1991 and 1993 to cover the country in 74 1:1,000,000 sheets conforming in specification to the International map of the World standard and published by **Xian Cartographic Publishing House** (**XCPH**). Many other states and cities throughout China also operate their own local map compilation and publication programmes, notably the **Guangdong Land and Surveys Department**.

Soviet military topographic mapping of China is available at the following scales: 1:1,000,000 (63 sheets, complete coverage, published 1971-1990); 1:500,000 (211 sheets, complete coverage, published 1970-1992); 1:200,000 (1,606 sheets, complete coverage, published 1969-1994); 1:100,000 (5,089 sheets, primarily complete coverage, published 1969-1995); 1:100,000 (373 sheets, northeastern coverage,

published 1967-1994) and city (1:10,000 to 1:25,000) topographic mapping of 140 major cities from Acheng to Zhuzhou (Chuchow) published between 1973 and 1991. These products are available in print, digital raster and digital vector GIS formats from **East View Geospatial**.

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GIS/Vector

China has made rapid progress in the last decade towards the capture of digital map data and the establishment of a national spatial data infrastructure. *The National Fundamental Geographic Information System* has been developed since 1984 by the **Chinese Academy of Surveying and Mapping**, and is used by **NBSM** for the integration of map, geographic name, gravity and geodetic databases. A 1:1,000,000 scale vector database was captured by scanning and manual digitizing, covers mainland China and the south China Sea, and structures information into 13 different thematic layers. The currency of these data is maintained using remotely sensed imagery, GPS data, statistical information and updated mapping. 80,000 names from 1:1,000,000 scale mapping are held in a separate relational database, and 1:4,000,000 scale data have been derived from the 1:1,000,000 database by selection and generalization. A digital elevation model for the whole of China has been created based upon relief from more than 10,000 sheets of topographic map coverage and incorporates about 25 million points, with a mean square error of 75 m in mountains, 20-41 m in hilly areas and 1 m on the plains. These data are all held in ARC/INFO running on SUN workstations.

Since 1995 all this data has been maintained by the **National Geomatics Center of China**, established by **NBSM** to oversee the development of the national spatial data infrastructure. National standards have been established and work is progressing on the capture of data from 1:50,000 and 1:250,000 scale mapping, leading to higher resolution topographic and name databases. Urban information systems have also been set up in several cities based upon larger scale digital coverages.

Another important source of digital map data for the People's Republic of China may be found at the **Australian Centre of Asian Spatial Information and Analysis Network** (**ACASIAN**). 1:1,000,000 resolution data sets are available for the whole country and derived from the official land use map. These include hydrology, land use polygons, administrative divisions, cities, roads and railroads. Commercial data are also available, such as postal geography, provincial, county and municipal boundaries together with urban data.

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Nautical

Hydrographic charting of Chinese waters is carried out by two different agencies. The **Maritime Safety Administration** publishes 150 charts of harbours, channels and inland waterways for domestic use. The **Mapping Agency of the Guarantee Department of the Chinese Navy** in Tianjin is responsible for maintaining 116 coastal charts.

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Geological/Scientific

Geological surveying of China started in 1913, but not until after World War II were systematic programs of series mapping started. Mapping is currently the responsibility of, and is coordinated by, the **Ministry of Geology and Mineral Resources**, and basic surveys are carried out by many different units in the Regional Geological Surveying Division. By the end of 1995 1:1,000,000 scale geological coverage of the country had been completed and 1:200,000 scale coverage was well advanced, with over 90 percent of the country surveyed. About 15 percent of China had been mapped at 1:50,000 scale. Before 1994 all these series of color-printed geological maps had been published using conventional production methods. Since then, however, a digital production flowline has been established using the MAPGIS suite of software, and the rate of publication has been increased. These series are published in the Chinese language. Regional geological coverage has also been completed for 30 provinces at scales between 1:500,000 and 1:1,000,000, and a wide variety of thematic earth science maps has been compiled. Up to five different map sets are published for each province: geological, tectonic and

magmatic rock are the most common themes. A national geochemical mapping program at 1:200,000 scale was started in the 1980s, resulting in computer-generated contour maps, and extensive geophysical surveys have also been automated.

Just as with topographic surveying, constituent bodies of the **Academy of Sciences** play a significant role in the compilation of earth science mapping of the country, notably the **Institute of Geology**.

The most important Chinese publisher of earth science themes is the **Geological Publishing House** (**GPH**), established in 1954, which issues an impressive range of maps and atlases, many of which are published as bilingual, or as English language editions. 1:4,000,000 and 1:5,000,000 scale mapping of the country is available for over 30 different themes, nine-sheet 1:2,500,000 scale quaternary and tectonic maps are published and 35 Chinese language provincial maps and memoirs.

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Thematic

The **Cartographic Publishing House** (**CCPH**) was founded in 1954 and publishes 90 percent of China's total map production, which amounted by 1999 to over 2.6 billion copies of 6,000 titles. Based in Beijing it acts as the publication agent for **NBSM** and issues a very wide variety of smaller-scale maps and atlases, as well as tourist and town mapping. Maps include Chinese-language political maps of provinces and autonomous regions and a wide range of smaller-scale wall maps for the educational market, including single-sheet coverage of countries of the world. Amongst the most notable of recent **CCPH** publications are the volumes of the Chinese national atlas.

Thematic mapping of China is carried out by various institutes of the **Academia Sineca** (**AS**), notably the **Institute of Geography** and the **Commission for Integrated Survey of Natural Resources**, but also by a number of different ministries.

Other thematic mapping of the country is published by **Science Press**. This includes image mapping of China compiled by the **Institute of Remote Sensing Applications** and available as false-colour LANDSAT maps published at four different resolutions. Other notable thematic coverages sponsored by **Academia Sineca** include land resources mapping of China at 1:1,000,000, and land capability mapping of the country, also published at 1:1,000,000 from the **Commission for Integrated Survey of Natural Resources**.

Petroleum Economist (**PE**) London publishes a regularly revised energy map of the country.

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Atlas

In 1981 compilation of a national atlas series was approved by the State Council. Some 150 organizations under 20 different ministries, commissions and bureaus have participated in the project, which is supported by **NBSM**. It will result in the publication of five independent but integrated atlas volumes, published in a standard format. Agricultural, economic and general atlases had been published by 1997, a physical atlas and the first part of the historical volume by the end of 1998, and the project will be completed by the publication of two further parts to the historical volume around Year 2000. Electronic versions of these publications have also started to be published, with the 1997 release of the *Electronic national economic atlas of China*.

The most significant recent publications are thematic earth science atlases, notably the *Atlas of geophysics in China*, and the new *Geological atlas of China*, which are also being produced on an automated flowline.

Numerous thematic atlases have also been produced presenting more generalized data, notably a number of medical atlases relating to disease distribution, and pedological atlases. Many are produced by the **Institute of Geography** of the Academy of Sciences, but some of these atlases have been copublished with western agencies. For example, *The population atlas of China*, with **Oxford University Press** and the *Language atlas of China with Longman*.

Electronic versions of hard copy thematic atlases are increasingly being supported by the Academy and other agencies. Demographic data from the **State Statistical Bureau**, which administers the Chinese censuses, have been released on CD-ROM in conjunction with

the **Institute of Geography** and the **State Planning Commission**. This electronic census atlas incorporates data relating to four population censuses and presents data as electronic mapping or in database format. Other census data and digital versions of census and administrative boundaries also include national data, provincial coverage and more derailed treatment of major urban areas derived from **State Statistical Bureau** and **NBSM** vector data. Much of this data is combined in electronic atlases such as *Superstat China*.

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Cadaster

Centralized cadastral mapping was started in 1988, and is progressing at a rate of about 2,500 sheets a year, to cover 14,000 settlements across China.

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Tourist/Reference

Many western cartographic houses have published general maps of China. These include the relief map published by **Esselte** in collaboration with **CCPH**, a map in the *International travel map* series from **ITM** and **Estate**, and in the *Bartholomew World travel* series from **HarperCollins**. **Nelles Verlag** covers the more settled parts of China with a series of four 1:1,500,000 scale maps. Many publishers issue town maps of Beijing, notably **ITM**, **Falk** and **Berndtson & Berndtson** (**B&B**).

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