Country Profile: France

Country Profile (PDF)

Country Resources

Topographic

Series	Publisher	Scale	Years	Sheets
Switzerland 1:100,000 Scale Topographic Maps	SWISSTOPO	1:100,000		23
Switzerland 1:200,000 Scale Topographic Maps	SWISSTOPO	1:200,000	2009	4
Switzerland 1:300,000 Scale Topographic Map	SWISSTOPO	1:300,000	2012	1
France TOP25 Series 1:25,000 Scale Topographic Maps	IGN	1:25,000	1985 – 2005	1,744
France TOP100 Series 1:100,000 Scale Topographic Maps	IGN	1:100,000		77
VMAP0 1:1,000,000 Scale Vector Data	NIMA	1:1,000,000	1992	4

Nautical

Series	Publisher	Scale	Years	Sheets
France Nautical Charts (All Scales)	SHOM	Varies	2018 – 2026	1,021

Aeronautical

Series	Publisher	Scale	Years	Sheets
The Netherlands 1:500,000 Scale Aeronautical Charts	ATCN	1:500,000	2014	1
United Kingdom 1:500,000 Scale Aeronautical Charts	CAA	1:500,000	2017	3
France 1:500,000 Scale Aeronautical Charts	IGN	1:500,000	2016	6

Geoscientific

Series	Publisher	Scale	Years	Sheets
France 1:50,000 Scale Geological Maps	BRGM	1:50,000	1936 – 2007	16
Italy 1:500,000 Scale Geological Maps	SGN	1:500,000	1977 – 1978	5
Switzerland 1:200,000 Scale Geological Maps	SGS	1:200,000	1942 – 1948	8
Switzerland 1:500,000 Scale Geological Map	SGS	1:500,000	2005	1

Thematic

Series	Publisher	Scale	Years	Sheets
The World 1:30,000,000 Scale Topographic Map Series 1145 (NGA)	DMA	1:30,000,000		2

Global Census Archive: GIS Census Data

East View Geospatial has an ongoing effort to add GIS census data to our Global Census Archive program. Please contact us for the status and availability of France census resources.

Global Resources

Topographic

Series	Publisher	Scale	Years	Sheets
Soviet Military City Plans	VTU GSh	Varies	1944 – 2003	3,021
Soviet Military 1:100,000 Scale Topographic Maps	VTU GSh	1:100,000	1947 – 1999	24,897
Soviet Military 1:200,000 Scale Topographic Maps	VTU GSh	1:200,000	1949 – 2009	17,799
Soviet Military 1:500,000 Scale Topographic Maps	VTU GSh	1:500,000	1953 – 1998	3,093
Soviet Military 1:1,000,000 Scale Topographic Maps	VTU GSh	1:1,000,000	1948 – 1994	1,089

Nautical

Series	Publisher	Scale	Years	Sheets
NGA Nautical Charts POD Certified (All Scales)	NGA	Varies	1943 – 2013	4,517

Aeronautical

Series	Publisher	Scale	Years	Sheets
Joint Operations Graphic (JOG 1501A) 1:250,000 – Aeronautical	DMA	1:250,000	1958 – 2007	6,380
Tactical Pilotage Chart (TPC) 1:500,000 Scale – Aeronautical	DMA	1:500,000	1967 – 2006	618
Operational Navigation Chart (ONC) 1:1,000,000 Scale – Aeronautical	DMA	1:1,000,000	1969 – 2001	248
Jet Navigation Chart (JNC) 1:2,000,000 Scale – Aeronautical	DMA	1:2,000,000	1971 – 1999	117
Global Navigation and Planning Chart (GNC) 1:5,000,000 Scale – Aeronautical	DMA	1:5,000,000	1981 – 1999	27

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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Country Profile (PDF)

Topographic

The state in France has been actively involved in the mapping of the nation since the publication of the Cassini surveys in the eighteenth century. This long heritage of topographic and thematic mapping has been accompanied by active collaboration between public and private sectors, and a continuing, dynamic and diverse range of published products.

The official mapping agency in the country, **Institut Géographique National (IGN)** is responsible for the topographic and geodetic survey of France, and its overseas territories. It was founded in 1940 as a successor to **Service Géographique des Armées**, and was designated a public agency in 1967. **IGN** compiles and maintains 1:25,000 scale topographic coverage of the country, publishes derived smaller scale maps, commissions and carries out aerial photography, and cooperates with other French agencies in the compilation of thematic mapping. Its overseas operations, including mapping carried out under technical aid programmes, are the responsibility of a subsidiary company **IGN France Internationale**.

The 1:25,000 scale map is the national basic scale. It was introduced in 1956 as a military map to conform to NATO standards, being compiled initially by reduction from a 1:20,000 scale series initiated after World War I. Meanwhile 1:50,000 scale mapping of the whole country conforming to the (Type 1922) specification was being maintained. Following a 1969 study it was recommended that a common specification for 1:25,000 and 1:50,000 scale mapping be adopted, the 1:25,000 and 1:50,000 scale series having been largely independent prior to this decision. This specification included four-color printing, standard simplified symbols for both maps, a new

classification of roads, some generalization of detail for the 1:50,000 scale series, a single revision cycle, and single arabic numbering systems (1:25,000 scale sheets being designated *est* and *ouest* depending upon whether they covered the east or west halves of their corresponding 1:50,000 scale map). Having completed publication of the 1:50,000 (Série orange) maps it was decided to withdraw the series from public sale and from 1990 until late in 1997 these maps were not available from IGN. They were, however, still maintained as a military edition, their index (using roman sheet numbering) was still used for thematic series such as the geological survey and in 1998 IGN once again released the complete topographic (Série orange) coverage.

The current hard copy specification of the 1:25,000 scale map started to appear in 1976 and is designated (Série bleue). Maps are based upon new photogrammetric survey and are on the Lambert conformal conic projection, Clarke 1880 ellipsoid. The standard sheet size covers an area of 0.2 grad longitude by 0.2 grad latitude, places being fixed in grads relative to the Paris meridian. French and international graticular systems, and Lambert and UTM grid are indicated in the sheet margins. Relief is shown with a 5 m contour interval, except for mountainous areas, where 10 m intervals and hill shading are used. From 1996 **IGN** embarked on a new program to produce 30 (Série bleue) maps a year in a digital production flow line. It is intended that the 1:25,000 scale map base of the country will be revised every eight years, using the *BD TOPO* database.

A small format 1:100,000 scale topographic series is no longer maintained by **IGN**, but is still used as a base map for some thematic series. The 1:100,000 scale is now used as a tourist map, covering France and Corsica in 74 overlapping, large format sheets and first introduced in 1970. This is the (Série verte), incorporating a trilingual legend, road distances and a four to five year revision cycle. The (Série verte) was redesignated from 1998 as the *TOP100* with additional tourist information. At 1:250,000 scale **IGN** publishes a second tourist series, currently designated (TOP250). This is revised every second year, is overprinted with tourist information and covers the country in 16 sheets, also available in bound atlas format.

For the last twenty years **IGN** has published an increasing number of maps to cater for the recreational market. Larger format 1:25,000 scale coverage is being published for tourist areas, as the (TOP25) series, which currently runs to about 200 sheets. Conventional (Série bleue) maps are withdrawn following publication of the new mapping, which incorporates a wide range of tourist information, and from 1999 includes an overprinted UTM grid to assist in GPS-based position finding. **IGN** also publishes tourist mapping with specialist information overprinted onto a variety of **IGN** base maps and issued in the series (Découvertes régionales), at scales between 1:80,000 and 1:250,000; (Plein-Air), a range of about 25 1:50,000 scale outdoor activity maps and (Cultures & environnement), a diverse coverage of wine growing areas and some national parks.

A new series of (cartes départementales) was started in 1998. These will cover each of the 96 departments, with most published at a scale of 1:125,000. The specification includes a road map with commune, cantonal and arrondissement boundaries, together with an index to prefectures, as well as inset plans of towns with more than 50,000 inhabitants, and 22 sheets published by 1999. Also in 1998 **IGN** started to publish a town plan series covering the major French conurbations, with nine cities covered by 1999.

Other tourist mapping of mountain areas is commercially published and uses **IGN** bases overprinted with recreational information. These include coverage of the Vosges mountains from **Club Vosgien**, an extensive range of Alpine maps from **Didier-Richard**, and mountain mapping of the Pyrenees from **Randonnées Pyrénéennes**. 1:1,000,000 scale tourist coverage is also published by **IGN** in fourteen different themes.

IGN is unusual amongst national surveys in publishing a wide variety of raised-relief maps of the mountainous areas of the country, offering complete 1:100,000 scale coverage of the French Alps and Pyrenees, as well as smaller scale coverage of these and other massifs and a single sheet map of the whole of France. Other small scale **IGN** maps are marketed as single sheet posters, including relief images derived from digital terrain data and published as a poster map, as well as a more conventional physical map of the country. **IGN** also publishes aeronautical charting in a four sheet 1:500,000 scale series conforming to ICAO specifications, designed for visual flight and incorporating regularly updated aeronautical information provided by the **Direction Générale de l'Aviation Civile**. Dissemination of all other aeronautical charting is the responsibility of the **Service de l'Information Aéronautique (SIA)**. En-route products include four sheet 1:1,000,000 scale coverage, various larger scales of the Parisian area, as well as charting of French overseas territories.

Soviet military topographic mapping of France is available at the following scales: 1:1,000,000 (9 sheets, complete coverage, published 1985-1990); 1:500,000 (23 sheets, complete coverage, published 1982-1995); 1:200,000 (140 sheets, complete coverage, published 1979-1996); 1:100,000 (478 sheets, complete coverage, published 1964-1991); 1:50,000 (1,406 sheets, primarily complete coverage, published 1978-1990) and city (1:10,000 to 1:25,000) topographic mapping of 72 major cities from Amiens to Verdun published between 1954 and 1990. These products are available in print, digital raster and digital vector GIS formats from **East View Geospatial**.

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GIS/Vector

IGN has invested heavily in the development of digital production of hard copy mapping, and in the capture of map data for the creation of a range of digital databases. Experiments in the 1970s applied new technologies for the publication of digitally derived large scale urban mapping. Emphasis shifted from the mid-1980s and **IGN** now maintains and updates a wide range of digital products.

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Nautical

The national hydrographic surveying and charting authority in France is **Service Hydrographique et Océanographique de la Marine (SHOM)**. It collects and maintains nautical information for civilian and military purposes, and carries out oceanographic surveys. Its headquarters are based in Paris, but the **SHOM** main establishment handling all information processing activities is located in Brest. Nearly 1,300 nautical charts are maintained, an increasing percentage of which conform to international chart standards: coastline, depth contours and soundings are held in digital form. Two hundred and ten 'P' charts aimed at the small boat market are also updated on an annual or biannual basis, and a new series of paper 'S' charts was launched.

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Geological/Scientific

The national earth science agency in France, the **Bureau de Recherches Géologiques et Minières (BRGM)**, was founded in 1959 and is based in Orléans. In 1995 it was reorganized to fulfil a public service and research role, including the collection and publication of geological information about the country. The current basic geological scale is the (Carte géologique) at 1:50,000 scale, about 90 percent of the country is now mapped in this series, sheets being published with separate geological notes and using the 1:50,000 scale topographic sheet lines and map bases. This series is replacing a 1:80,000 scale map, with many sheets based upon surveys dating from the late nineteenth century. A recent innovation has been the release of raster scanned and geo-referenced versions of many 1:50,000 scale maps, which are available in TIFF format on CD-ROM. **BRGM** publishes four other series on 1:50,000 sheet lines, but the spatial coverage of these themes is local or regional rather than national. An impressive diversity of smaller scale earth science mapping is also published, including a 1996 edition of the (Carte géologique de la France au millionième), and a 1:250,000 scale series for on and offshore geology. Among the themes published are magnetic and gravity maps, tectonic coverage, a number of hydrogeological themes, offshore mapping, and minerals maps. Many more local programs are also published, such as the (Carte zermos) series, mapping slope failure hazard areas in the French Alps, or departmental thematic surveys. These programs emphasize more applied themes, including geothermal mapping.

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Soil

Created in 1946, **Institut National de la Recherche Agronomique (INRA)** is the largest European research institute in its field and supports 22 regional research centers across France, concerned with a wide diversity of agricultural research. **INRA** carries out soil mapping of the country: 22 1:100,000 scale sheets have been published, using the sheet lines of the old 1:100,000 scale topographic survey, each with an extensive separately published sheet explanation. **INRA** also publishes a 1:1,000,000 scale two-sheet soil map and a 1:250,000 scale coverage of the area around Paris.

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Vegetation/Forestry

A nation-wide vegetation mapping program was initiated in 1947 by the **Service de la Carte de la Végétation**. This series of 1:200,000 scale color maps shows actual land cover, including human induced changes, as well as potential vegetation and ecological regions. Mapping was completed a decade ago and some sheets were issued with explanations. The **Centre d'Études et de Réalisations Cartographiques Géographiques (CERGG)** in Paris produced a number of thematic maps in the 1970s and 1980s, including 1:50,000 scale geomorphological mapping of France on topographic sheet lines, published folded and with explanatory texts.

Agricultural land capability mapping is carried out by different **Directions Départementales de l'Agriculture et de la Forêt (DDAFs)**, located in the administrative centers of Départements across France. This program is coordinated from the **Ministère de l'Agriculture et de la Forêt**, Paris and has led to the publication of many 1:50,000 scale maps, with yield-capacity shown in six classes defined on the basis of both physical and socio-economic criteria.

Since its establishment in 1958 **Inventaire Forestier National (IFN)** has been responsible for the production of forest mapping of France. **IFN** is currently funded through the **Ministère de l'Agriculture et de la Forêt**. A program of resurvey on a ten year cycle has been instituted, which is used to compile 1:200,000 scale full color forest mapping on departmental sheet lines; the third update cycle is now well under way, and the whole country is available in either second or third cycle maps. Maps are compiled from aerial photographic coverage, supplemented by extensive ground survey and show forest vegetation, classified by age and type, on an **IGN** 1:250,000 scale outline base. Smaller scale coverage is also published on a national basis and at 1:500,000 scale for eight regions, showing forested areas, and departmental or forest region maps have recently been published in two versions of atlases published in four regional parts. **IFN** has developed an ARC/INFO-based digital mapping system for resource management.

The **Institut de la Carte Internationale de la Végétation (ICIV)** within **CNRS** collaborated in the publication of small scale vegetation mapping of several third world countries, a program which is now administered by the **Laboratoire d'Écologie Terrestre** in Toulouse. **@ct'image** now publishes these maps, which are marketed as the (Écocart) series of international vegetation and ecology maps.

The **Département d'Élevage et de Médecin Vétérinaire Tropicales (DEMVT)** includes a cartographic section established in 1964 and a remote sensing applications laboratory established in 1978. It has published pasture and range monitoring maps and atlases, predominantly in former French territories in Africa, and is now based in Montpellier. Other thematic mapping of tropical countries is carried out by **Centre d'Études de Géographie Tropicale (CEGET)**.

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Thematic

The 1:250,000 scale climatic map of France prepared by **Environnement Climatique** in the **Centre National de la Recherche Scientifique** is a nine-color series with accompanying notices. It was started in 1972 and covers the Alps and Rhone Valley, Britanny, the Jura and Vosges, using a 1:250,000 scale **IGN** base. Only 12 of the projected 41 sheet national coverage have been published. 1:500,000 scale coverage of areas of low relief with less climatic variation was planned but in the 1990s emphasis shifted to climatic modelling rather than map publication.

The national focal point for the EU CORINE land cover program is the **Institut Français de l'Environnement (IFEN)**, established in Orléans in 1991 as the statistical service for the **Ministry of the Environment**. CORINE data is available at 1:100,000 scale as digital data, or as hard copy and as regional images, and depict 44 land cover categories, with a ground resolution down to 25 m.

Meteo the French meteorological agency publishes weather forecast and climatic mapping.

Institut Français de Recherche pour l'Exploitation de la Mer (IFREMER), the **French Institute of Research and Exploitation of the Sea**, was established in 1984 from the merging of **CNEXO (Centre National pour l'Exploitation des Océans)** and **ISTPM (Institut Scientifique et Technique des Pêches)**. It maintains four bases on the French coast and its publications include more than 200 bathymetric charts compiled between 1971 and 1991, as well as a number of thematic oceanographic and climatic atlases. **IFREMER**

has also collaborated with **BRGM** in the publication of a number of offshore geological surveys of the French coast, and recent publications have focused upon the mapping of exclusive economic zones. Other thematic oceanographic mapping is compiled by **GÉOLITTOMER UMR 6554**, Nantes, including two volumes of a coastal atlas published by **CNRS**. Coastal inventory mapping prepared in the **Inventaire Permanent du Littoral** is now the responsibility of **Conservatoire de l'Espace Littoral et des Rivages Lacustres**. This includes four-color process printed mapping at 1:25,000 and 1:100,000 scales derived from air photography, as well as land use and land holding data with associated census statistics held in a relational database. Data was generalized and published in atlas format in the *Atlas des espaces naturels du littorel*, in 1991.

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Atlas

A multi-volume collection, designated *Atlas de France*, is being completed in 14 volumes and published by **GIP Reclus** in association with **Documentation Français**. Each thematic volume is coordinated by specialist academics and comprises between 100 and 200 maps and analytical texts; the first three volumes in the series were issued in 1995 and the project was completed in 1999. **GIP Reclus** was established in 1984 and brings together expertise from diverse public organizations, government ministries, universities and private agencies in multi-disciplinary regional research. An active publication program has included atlases of other states as well as specialist thematic atlases of France or French regions, in association with such publishers as **Fayard** and **Publisud**.

The lack of a national atlas in the 1970s and 1980s was partly compensated for by a large number of high quality regional atlases. The **Délégation à l'Aménagement du Territoire et à l'Action Régionale (DATAR)** sponsored various university-based institutes to compile these volumes many of which were published by **Berger-Levrault**. Other recent notable regional atlas coverage includes the evolving electronic atlas of (Languedoc-Roussillon) from **GIP Reclus**, as well as an ongoing program of very well designed departmental and regional social and economic atlases from **Cartographie et Décision (C & D)**, which incorporate mapping of a number of socio-economic variables in association with **INSÉÉ** and departmental or regional authorities. In 1996 **C & D** experimented with the publication of an English language version of its Rhône-Alpes regional volume. **Éditions Technip** publishes a number of small scale earth science maps of continental or sub-continental scale and bathymetric mapping of the Rhone delta area, in association with the cartographic unit of **Bureau d'Études Industrielles et de Coopération de l'Institut Français du Pétrole (BEICIP-FRANLAB)** which continues to compile many thematic earth science maps for other agencies.

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Cadaster

Larger scale cadastral mapping has been the responsibility of the various local survey authorities across the country, coordinated through the work of the **Sous-Direction des Affaires Foncières Cadastrales et Domaniales**, in the **Direction Générale des Impôts**. A new general cadastral revision started in 1990, the cadastral record includes 590,000 large scale plans, with about 20,000 of these being captured each year as digital data.

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Tourist/Reference

France has an active commercial mapping sector. The largest publisher is **Michelin**, one of Europe's most important commercial map-makers. Its extensive range of tourist, motoring and town maps and guides dates back to the publication of the first (guide rouge) in 1900 and of the first (carte routière au 1/200 000) in 1910. The 1:200,000 scale series is still at the center of Michelin's hard copy publication program and is available in the standard 40 sheet series or as larger format 17 sheet (cartes régionales). In addition **Michelin** publishes extensive map and atlas coverage of other European countries, as well as smaller scale mapping of other continents, and town maps of world cities. A wide range of town and suburb maps with differing overprints give coverage of Paris.

The most comprehensive range of town maps is issued by **Blay-Foldex**, Montreuil, part of the **Kmmerly + Frey** group, and formed from the merger of the former **Recta Foldex** and **Plan Guide Blay** companies. **Éditions Grafocarte** publishes two ranges of commercial maps. The (Bleu & Or) series comprises about 70 'plan guides' to French towns, comprising street maps, various indexes and larger scale city center insets. Regional town atlases bring together town maps for a range of five départements. In addition **Grafocarte** specializes in the leisure boat navigation market. The (navicarte) range charts coastal waters, including Spanish and Italian seas, and a range of 23 maps covers inland waterways. **Éditions Géographiques et Touristiques Gabelli** compile the annually revised network map for French railways (**SNCF**), as well as a range of world-wide maps, maps of Paris and road and leisure maps of France.

Other commercial houses include **Edi-Service** which produces a variety of tourist mapping of the south eastern departments, and **Média Cartes** which concentrates upon statistical cartography. **Éditions Massin** also produces town maps of Paris, including a CD-ROM-based place and route finder in its (L'Indispensables) range. **Éditions Ponchet Plan-Net** has been publishing mapping since 1950 and now maintains a range of 93 maps relating to Paris and its region. **Cartes Tarides** is a long established town map specialist. **Oberthur Éditions** issues the regularly updated (Index atlas de France), which includes departmental maps, street maps and an extensive gazetteer of place names.

A number of commercial suppliers specialize in the provision of digital data sets. **Géo3D** is the leading commercial distributor of digital terrain data in the country, with a range of products at 10 m, 50 m, 100 m and 250 m resolution, also increasingly available for a number of overseas countries. The **Teleatlas** range of digital road maps covers France with data available in three different road products – (StreetNet, RoadNet, and MultiNet).

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Census/Demography/Statistics

Institut National de la Statistique et des Études Économiques (INSÉÉ) is the French national statistical agency. It has been responsible for the compilation of a number of hard copy atlases, especially focusing upon regional social and economic volumes. I**NSÉÉ** has developed a digital mapping system in collaboration with **IGN**, **Cartographie Infracommunale Numérisée (CICN)**.

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