

# THE NATIONAL ATLAS OF JAPAN



REVISED EDITION

Geographical Survey Institute

© Geographical Survey Institute 1990

FIRST EDITION 1977

REVISED EDITION 1990

Compiled by the Geographical Survey Institute, Ministry of Construction  
Kitasato-1, Tukuba-Si, Ibaraki-Ken

Published by the Japan Map Center  
Aobadai 4-9-6, Meguro-Ku, Tōkyō

Printed in Japan

## ***PRIME MINISTER'S MESSAGE***

The publication of the revised edition of “The National Atlas of Japan” fills me with great pleasure. The Atlas now contains the latest information comprehensively compiled about the natural environment, economy, society and culture of Japan.

It is my sincere wish, that in this time of rapid change this volume will provide greater understanding of both Japan and the Japanese.

**海部俊樹**

Toshiki Kaifu

Prime Minister of Japan

## ***FOREWORD***

The revised edition of “The National Atlas of Japan” has been completed. This comprehensive work is based on highly reliable surveys conducted by government agencies and local public bodies. It contains various information about subjects such as Japan’s natural environment, economy, society, and culture. I hope that it will be used by the Japanese in their homes and offices and also serve to fully introduce Japan to the world.

**綿貫 民輔**

Tamisuke Watanuki  
Minister of Construction

## ***PREFACE***

More than ten years have passed since Japan's first national atlas, "The National Atlas of Japan" was published. During this decade, Japan and the lifestyle and activities of the Japanese have changed greatly and relationships with the rest of the world have grown far closer. In addition, with our country becoming more information-oriented maps and atlases are playing a greater role as a basis for a variety of activities by the people. Under these circumstances, it gives us great pleasure to publish "The National Atlas of Japan, Revised Edition", containing the latest data.

A national atlas is, as its name implies, an atlas which represents a country. Since such an atlas must contain a wide range of information and knowledge, the Committee for the National Atlas of Japan, composed of representatives of the authorities concerned and other learned and experienced persons, was established and the atlas prepared on the basis of the Committee's discussions. As a result, this revised edition includes a total of 235 thematic maps and their descriptions in 14 fields, such as : nature, population, industry, trade, society, education and culture. Computer technology was used to expedite the preparation of the maps.

It is my hope that those engaged in administration, research, education, corporate activities, international cooperation, etc., and all members of society will fully utilize this atlas to gain a deeper understanding of the state of Japan.

Finally, I wish to extend my thanks, not only to the Committee for the National Atlas of Japan, but also to those who assisted with the preparation in various ways, such as providing data and advice.

**Jinro Yamaguchi**  
Director General  
Geographical Survey Institute



# OUTLINE OF THE PREPARATION

## 1. History of the Preparation

The systematic preparation of thematic maps, which describe the state of a country, were carried out for the first time in Japan when the Geographical Survey Institute compiled land state maps on a scale of 1:800,000. The editing work was conducted from 1946 to 1960 in order to prepare maps for on a national basis such fields as land use, electricity, working population and urban functions, agriculture, traffic and population density. However, these maps were not compiled into a single atlas. In 1948, "The Atlas Japan" was also published by the Geographical Survey Institute. Although this atlas was an A4-sized booklet of 40 pages containing three kinds of thematic maps (terrain, land use and climate) and general maps on a scale of 1:2,000,000, it can be considered an important step in the full-scale preparation of a national atlas.

Around 1960, partly as a result of the United Nations Regional Cartographic Conference for Asia and the Far East's recommendation to facilitate the preparation of a national atlas, Japan started to examine existing thematic maps and statistics and to collect and examine the national atlases of other countries. In 1969, the thematic maps to be compiled into a national atlas were prepared on a trial basis and the layout, working process and other issues discussed concretely.

In 1971, the government formally decided to support the National Atlas Preparation Project financially and work was undertaken as a five-year program. The project was based on discussions by the Committee for the National Atlas of Japan, with a national atlas entitled "The National Atlas of Japan" being published in March, 1977. "The National Atlas of Japan" was an A2-sized atlas of 351 pages containing 276 thematic maps and their descriptions in 15 different fields such as nature, development and conservation, society and culture, and has been utilized as basic data for a true understanding of the state of Japan ever since. Later, in the process of revising the thematic maps contained in "The National Atlas of Japan", the Geographical Survey Institute and the Committee developed the idea of creating a thematic atlas containing maps on particular themes and a new project with regional planning as its theme was started in 1979. This atlas was completed in September, 1984 and published under the title of "The Atlas for Regional Planning - Actual Conditions and Changing Aspects of the National Land in Japan".

Revision of "The National Atlas of Japan" itself was begun under a five-year program (1986-1990). The revisional work was conducted under the following principles: review existing maps and add new thematic maps, if necessary; provide subject matter comparable with that of the first edition; and review the scale and style of each map to increase efficiency. Technically, the "Computer-aided Cartographic Processing System", introduced by the Geographic Survey Institute, was used to computerize the editing and drawing process where possible, enabling the work to be done more rapidly.

## 2. Composition and Standards

A Japanese and English version of "The National Atlas of Japan, Re-

vised Edition" were prepared simultaneously, both of which are composed of the following items:

- preface, table of contents, etc. 6-pages
- thematic maps (including descriptions) 211-pages
- index of administrative districts 7-pages

"The National Atlas of Japan, Revised Edition" is printed on A2 paper. There are 13 kinds of scales for thematic maps, ranging from 1:250,000 to 1:250,000,000; however, the scale of 1:5,000,000 is most frequently used. Five to twelve colors are used for the thematic maps.

The descriptive section contains comments, a table of data used and subcharts; in principle, one page of description is provided for three pages of thematic maps. The comments are brief descriptions to help atlas users understand each subject map easily and the subcharts are small maps, graphs and numeric tables intended to supplement the thematic maps. In some cases, maps with important subjects appear in the form of a sub-chart due to limited space.

Furthermore, the atlas is bound in the same manner as an album, thus enabling users to remove or change individual sheets.

## 3. Computerization of the Editing and Drawing

The major difference in the preparation processes of the first edition and the revised edition is that in the revised edition the editing and drawing work, which was done manually in the past, was computerized wherever possible. Choropleth maps and pie charts were the main objects of computerization.

### (1) Input

First, graticules, coastlines, rivers and administrative boundaries in the base maps on a scale of 1:4,000,000 to 1:12,000,000 were digitized at 50µm pitch using a drum scanner. Then, through vectorization, cord line extraction, modification, attribute binding and normalization, the data were stored in files. The administrative boundaries converted into polygon data with administrative codes. Statistical data, such as population, were typed from statistical tables or directly entered from magnetic tapes.

### (2) Editing

Data incorporated into choropleth maps, such as population density, were edited by analysis on the basis of administrative units, divided into classes to characterize the distribution and then matched with the polygon files. Data incorporated into pie charts, such as the gross prefectural product, were converted to files showing the centers of circular symbols and parameter files, including formulae for finding radii and the number of items so that circular symbols could be used at appropriate locations in suitable sizes. Thematic maps expressing the distribution of public facilities, such as libraries with point symbols, were prepared by modifying digital information prepared by the Geographical Survey Institute. However, some re-adjustments were made for regions where the number of symbols had to coalesce.

## (3) Output

Edited data were converted into raster form once more and printed out by a laser plotter on platemaking film at 50µm pitch. The base map images are printed in black and gray and the thematic images in cyan, magenta and yellow. The colors of the thematic maps are expressed by dithered patterns composed of combinations of 4×4 dots.

## 4. Committee for the National Atlas of Japan

The Committee for the National Atlas of Japan was established in order to discuss the contents, composition and expressions of the National Atlas in order to make it widely available as basic information for land development and conservation, domestic and international studies, education and other applications. The Chairperson of the Committee is Vice-Minister of Construction, while the other members are persons from the authorities concerned and other learned and experienced persons. Some members serve as experts.

In the case of the revisional project of the National Atlas, Committee meetings were held twice to discuss the overall composition and an expert committee meeting held ten times to discuss technical matters.

## 5. Staff

The staff of "The National Atlas of Japan, Revised Edition" are as follows:

- comprehensive planning and compilation .....  
Geographical Survey Institute, Ministry of Construction
- publication ..... Japan Map Center

The maps were drafted by the following seven map preparation companies under the supervision of the Map Compilation Division of the Geographic Department of the Geographical Survey Institute: Kokudo Map Inc., Shoji Chart Inc., Chuo Chizu Inc., Naigai Chizu Inc., Buyodo Inc., Hokkaidō Chizu Inc. and Midorikawa Map Printing Inc. The Atlas was printed and bound by Dai Nippon Printing Inc. under the supervision of the Japan Map Center. The paper used for the Atlas was supplied by Tokushu Paper MFG Inc. The translation service was provided by Tsukuba Information Lab. Inc. under the supervision of the Map Compilation Division.

## COMMITTEE FOR THE NATIONAL ATLAS OF JAPAN

Status as of March 31,1990

Chairperson: Vice-minister of Construction

### Government Organization

| Ministry or Agency   | Ordinary Members   | Special Members   |
|--|--|---|
| Prime Minister's Office,<br>Management and Coordination Agency<br>Hokkaidō Development Agency<br>Defense Agency<br>Science and Technology Agency<br>Environment Agency<br>National Land Agency | Director-General, Statistics Bureau<br>General Executive<br>Director-General, Bureau of Defense Policy<br>Director-General, National Institute of Science and Technology Policy<br>Councillor, Minister's Secretariat<br>Director-General, Planning and Coordination Bureau<br>Director-General, Land Bureau | Director, Population Census Division, Statistical Survey Department<br>Director, Planning Office<br>Director, First Defense Intelligence Division<br>Head, Planning Division<br>Director, Environmental Management Division, Planning and Coordination Bureau<br>Director, Planning Division<br>Director, National Land Survey Division<br>Director, Overseas Public Relations Division |
| Ministry of Foreign Affairs  | Press Secretary/Director-General for Public Information and Cultural Affairs, Minister's Secretariat   |   |
| Ministry of Finance  | Councillor, Minister's Secretariat<br>Director, Reserch Institute, Printing Bureau   | Director, Research and Planning Division<br>Manager, Research Control Section, Research Control Division  |
| Ministry of Education<br>Agency for Cultural Affairs   | Director-General, Elementary and Secondary Education Bureau<br>Director-General, Cultural Properties Protection Department   | Director, Textbook Division<br>Director, Monuments and Sites Division   |
| Ministry of Health and Welfare   | Director-General, Statistics and Information Department, Minister's Secretariat<br>Director-General, Institute of Population Problems  | Director, Office of System Designing and Data Processing, Administration and Planning Division<br>Chief, Policy Study Section, Department of Population Policy Studies  |
| Ministry of Agriculture, Forestry and Fisheries  | Senior Councillor for Technical Affairs, Minister's Secretariat<br>Director-General, Statistics and Information Department, Economic Affairs Bureau  | Director, Research Division<br>Director, Planning and Information Division  |
| Ministry of International Trade and Industry   | Director-General, Research and Statistics Department, Minister's Secretariat<br>Director-General, Geological Survey of Japan, Agency of Industrial Science and Technology<br>Director-General, Research and Data Processing Department, Transport Policy Bureau  | Director, Administration Division<br>Director, Geological Information Center<br>Director, Administration Division<br>Director, Coastal Surveys and Cartography Division   |
| Ministry of Transport<br>Maritime Safety Agency<br>Meteorological Agency   | Director-General, Hydrographic Department<br>Director, Observations Department   | Head, Office of Statistics, Observations Management Division<br>Director, General Planning and Policy Division<br>Director, Industry and Labor Research Division  |
| Ministry of Posts and Telecommunications   | Councillor, Minister's Secretariat   | Director, Engineering Affairs Management Section  |
| Ministry of Labor  | Director-General, Policy Planning and Research Department  | Special Director for Regional Planning and Project Coordination   |
| Ministry of Construction   | Assistant Vice-Minister for Engineering Affairs, Minister's Secretariat<br>Director-General, Economic Affairs Bureau   | Director, Research and Information Division<br>Director, Administration Department<br>Director, Planning Department<br>Director, Geographic Department<br>Director, Map Management Department<br>Director, Local Administration Division  |
| Ministry of Home Affairs   | Director-General, Geographical Survey Institute<br>Director-General, Local Administration Bureau   |   |

### Academic Scholars

| Ordinary Members   |  |
|--------------------|--|
| Tomoko Inukai      | Essayist   |
| Shinzo Kiuchi      | Emeritus Prof., University of Tokyo                |
| Masayoshi Takasaki | President, Japan Map Center                        |
| Yoshihiko Takehisa | Prof., Faculty of Letters, Nara Women's University |
| Osamu Nishikawa    | Prof., Faculty of Letters, Rishso University       |
| Yoshimichi Harada  | President, Japanese Association of Surveyors       |
| Taiji Yazawa       | Emeritus Prof., Tokyo Metropolitan University      |

| Special Members |  |
|-----------------|--|
| Atsushi Otomo   | Prof., Faculty of liberal arts, Utsunomiya University                            |
| Tatsuro Kunishi | Lecturer, Faculty of Engineering, Chiba University                               |
| Eiji Gojyo      | Prof., College of Humanities and Sciences, Nihon University                      |
| Syoji Takeuchi  | Director, Area Information System Department, Marketing Intelligence Corporation |
| Yasuo Masai     | Prof., Faculty of Letters, Rishso University                                     |
| Kazuo Watanabe  | Prof., Faculty of Letters, Hosei University                                      |