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Vol. XV—PART IX

CENSUS ATLAS

OF

UTTAR PRADESH

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of the Indian Administrative Service
Superintendent of Census Operations, Uttar Pradesh



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FOREWORD

FEW PEOPLE REALIZE, much less appreciate, that apart from the Survey of India and the Geological Survey, the Census of India had been perhaps the largest single producer of maps of the Indian subcontinent. Intimate collaboration between geographer and demographer began quite early in the modern era, almost two centuries before the first experiments in a permanent decennial Census were made in the 1850's. For example, the population estimates of Fort St. George, Madras, made in 1639 and 1648, and of Masulipatnam and Bombay by Dr. John Fryer around 1672-73 were supported by cartographic documents of no mean order. The first detailed modern maps, the results of Major James Rennell's stupendous Survey of 1767-74, were published in 1778-1780 and Henry Taylor Colebrooke, almost our first systematic demographer, was quick to make good use of them by making estimates of population in the East India Company's Possessions in the 1780's. Upjohn's map of Calcutta City, drawn in 1792-93, reprinted in the Census Report of Calcutta for 1951, gives an idea of the standards of cartographic excellence reached at that period. In the first decade of the nineteenth century, Francis Buchanan Hamilton improved upon Colebrooke's method in which he was undoubtedly helped by the improved maps prepared for the areas he surveyed.

It is possible that the Great Revenue Survey, begun in the middle of the last century, offered the best guarantee of the success of decennial population censuses proposed shortly before the Mutiny of 1857. In the experimental censuses organised between 1865 and 1872 the Survey of India, the Provincial Surveys and Census of India struck an informal but stable partnership which has been fascinatingly described by R. H. Phillimore in his monumental four-volume work on the *Historical Records of the Survey of India*. This partnership continues to this day. On the eve of each census, the Census of India proceeds by making use of (a) the cadastral surveys prepared by the Provincial (now State) Surveys and (b) the topographical surveys of the Survey of India. In the course of its decennial operation, the Census of India begins by revising and bringing up-to-date the minute jurisdictional changes made during the decade. Next, and equally important, it revises the lists of inhabited and uninhabited villages and of towns and cities. These are placed at the disposal of the Survey of India. Thirdly, at each decade the Census of India itself produces maps of its own which serve to strengthen the study of geography at official and academic levels. These are both numerous and of great range and variety. What is more, they are often unsurpassed for their wealth of authentic regional detail. For proof, if proof were needed, one has only to turn to the geographical maps published in the 1872 Census Reports of North-West Provinces, Cochin, Bengal and the very excellent volume of maps of different Collectorates of the Bombay Presidency, published as Part IV of the 1872 Census Report of Bombay, or the fine taluk maps of Mysore State published in the Census Report of 1891. The high watermark of a skilful fusion of topographical and thematic maps was reached in maps published in the encyclopaedic Linguistic Survey of India and the State Census Reports of 1931 and the special All India Ethnographic Appendix published in 1933. In fact, the particular genius of the Census of India seems to lie as much in the high quality of its themato-topographic maps as in the pure thematic maps so essential for Census analysis and presentation.

The restricted programme in 1941 on account of World War II temporarily restrained the cartographic activities of the Census of India, although several excellent contributions were made. One of the major contributions of the 1951 Census was the excellence of detail achieved in the great bulk of taluk/tehsil maps published in the District Handbooks.

The Census of India has been a discontinuous affair up to 1961. The Census Commissioner for India in 1941 compared it to the mythical phoenix. The Census starts every time with a very limited assignment, but ends up, thanks to the vistas that open up with the progress of the work and the hunger they stimulate, by becoming the most fruitful single source of information about the country.

The seeds of the 1961 Census Atlas Project were unobtrusively sown in para 42 of the Registrar General's first 1961 Census Circular of March 1959 to State Census Superintendents as follows :

It will be very useful to have a map for every village and ward of a town showing the broad lay-out of the village and the housenumbers shown therein. The map need not be drawn to scale but a map large enough to show the housenumbers would be sufficient. A map of this kind, if prepared, will also help the maintenance of housenumbers.

This suggestion was wholly accepted in the First Conference of State Census Superintendents held in September 1959, which authorised State Census Offices "to appoint one or two good draftsmen for the preparation of experimental maps, charts, graphs and histograms for their own use". Note was taken of 'the serious but avoidable blemish' left in some census years on account of 'the lack of good maps and charts'.

That the seeds did not fall on stony ground was evident from the enthusiasm with which the States welcomed the Registrar General's next circular laying down the details to be incorporated in the village maps. It caught their imagination so well that many State Census Superintendents added of their own accord to the details stipulated by the Registrar General's Office. A zest was thus created which whetted the appetite it fed.

By August 1960, several State Census Superintendents had set up their own Map Sections. The experience and confidence gained in the process encouraged a general desire at the Second Census Conference in August 1960 to go in for a much enlarged programme of map production than had been originally proposed. It was no longer a question of selling an idea but of feeding the organisation with a project that would be worth working for.

The satisfactory progress of the sorting and tabulation programme placed at the disposal of my colleagues an exciting world of possibilities. On the eve of the Third Census Conference in February 1962, the map project had passed its tentative stage. All Census Superintendents were now thinking of producing enough maps to fill a sizable atlas.

The Registrar General's circular of September 1961 had already anticipated the general desire by proposing that Part IX of the State Census Series should take the form of an atlas. This was followed up by two circulars in November 1961 giving details of the contents of the projected Atlases and the method by which each map was to be produced. This was in turn followed up some time later by a third circular in September 1962 suggesting the levels to which analysis of data should be carried out for the purpose of each map.

Inquiries had, in the meantime, been made of the Survey of India and the National Atlas Organisation on the extent to which either would be prepared to share the task with the Census of India. The Director of the National Atlas Organisation was good enough to undertake the preparation on 1 : 1M scale of population maps for 1961. Similar maps containing the 1951 data had, meanwhile, been completed which the Government published at the Registrar General's request.

A chance meeting in the middle of July 1959 with Dr. Joseph E. Schwartzberg of the University of Wisconsin proved of great profit to the 1961 project. I am under a personal debt to Dr. Schwartzberg for

PREFACE

Though the avowed task of the Census Organization of India was 'no more than the production of Census Tables and Reports for 1961', it has in fact undertaken as many as twenty-six projects of which the 1961 Census Atlas Project is just one.

This Atlas is a visual presentation of demographic, economic and socio-cultural data dealt with in the General Report and elsewhere, its standard contents being (1) Orientation, (2) Physical Conditions, (3) Demographic Structure and Trends, (4) Economic Aspects, (5) Socio-Cultural Aspects, and (6) Demographic Regions.

The majority of the maps in this Atlas portray the data published in various publications of the Census of India, 1961, but several other Government Departments and agencies have also liberally extended valuable assistance to enrich it. Their names are indicated in a separate list on pages X-XII. They have also been given at the bottom of the relevant notes on the various maps. I place on record my grateful acknowledgment to these bodies, especially the Geological Survey of India, the Meteorological Department, the Railways and a large number of establishments of the Government of Uttar Pradesh like the Board of Revenue, the Electricity Board and the Departments of Agriculture, Education, Public Works, Medical and Health, Forest, Economics and Statistics and Transport. The utility of this Atlas has been greatly enhanced by the material supplied by them. Where the map is based solely on Census data, the source has not been mentioned. Unpublished data collected from sources other than the Census of India have also been given at the end of the Atlas as an Appendix. Generally the unit of study is the District, as in 1961, but in some maps we have also gone down to the Tahsil level. Explanatory notes have been given against every map, more particularly to bring out those features which would ordinarily escape notice.

Wherever a map is prepared by the choropleth method, two rectangular diagrams have also been given immediately under the note relating to it. One depicts the number of districts/tahsils falling in each of the ranges adopted for the map and their percentage to total districts/tahsils; the other shows the population of 1961, unless stated otherwise, living in those districts/tahsils and its percentage to total population.

As the northern boundary of this State is also the country's external boundary, we had to refer our maps for certification to the Director of Map Publication, Survey of India. As such the external boundary of India on each and every map in this Atlas agrees with the Record/Master copy certified by the Survey of India. I am grateful to the Survey of India for their assistance and guidance in this respect. I had occasion to meet Shri N. L. Gupta, C.E., Superintending Surveyor, of the office of the Surveyor General, India, twice about our maps and on both occasions he was helpfulness itself. I place on record my thanks to him for his kindness.

Drawing of maps and writing about them are surely difficult enough, but it is not easy to come by a Press which will execute the work with promptitude and accuracy. Thanks to Shri D. Natarajan, Deputy Registrar General, India, since retired, the printing of our Atlas was entrusted to The Statesman Press, Calcutta. They not only prepared the proofs with the utmost promptitude, but gladly carried out the improvements suggested by us from time to time. Our grateful thanks to The Statesman Press for the excellent execution of the job entrusted to them.

The map unit headed by Shri Lakhan Singh, Statistical Assistant, was established in this office in May 1962. The names of the members of this

team has been their willingness to take up every assignment with enthusiasm and efficiency. There is nothing that they were asked to do which they have not done. They have prepared the maps for our Atlas Volume and besides these, they have also drawn a number of maps and diagrams for our other publications at very short notice. Though this "manpower was drawn just from the street", these young recruits have given an excellent account of themselves by producing this Census Atlas of Uttar Pradesh—a unique publication.

The Map Officer, Dr. (Miss) P. Sen Gupta, M.A., Ph.D. (London) has scrutinized these maps and freely given suggestions for their improvements. The Atlas owes its cartographic excellence to her expert guidance. I am most grateful to her for her unfailing attention to our needs and removal of all our difficulties.

Our grateful thanks are due also to the Director of the National Atlas Organization, Dr. S. P. Chatterji, M.Sc., Ph.D., D.Lit., for giving us his valuable time in explaining the process of map-making and supplying a number of plates published by the said organization.

This Atlas Volume has been prepared under the direction of Shri P. P. Bhatnagar, I.A.S., our dedicated Census Superintendent. Even though he was fully preoccupied in writing the General Report of the 1961 Census, the Atlas has had the benefit of his close scrutiny at every stage. It would not have seen the light of day but for his keen and active interest in it throughout. He has paid for his unflagging interest in all the Census Projects "with his sweat and toil at the cost of his health, leisure and happiness". He has since rejoined the State Government but his advice and guidance are always available to the Census Organization. I am grateful to him for his kindness, patience and understanding.

Shri Asok Mitra, I.C.S., has master-minded all the projects of the Census Organization. It is through the magic of his personality that 'so much has been achieved in so many directions with so little by so few in so short a time with such devotion'. It is his extraordinary leadership that has been able "to work up a purely temporary staff to the point of instilling such a sense of dedication into them that they would think nothing of working till late evening one day with the certain knowledge that they would be on the streets next morning with no job to look forward to". And all this is done so unobtrusively that one doubts if he does it at all. The genesis of the Census Atlas is itself characteristic of this master-style. Who would imagine that para 42 of the Registrar General's first 1961 Census Circular of March 1959 to State Census Superintendents, cited in his foreword to the present volume, was really the precursor of the State Census Atlas? From the notional town/village maps mentioned therein to the highly complicated maps of the Census Atlas is indeed a far cry. But thanks to the inspiration he constantly gave by precept and practice, everything has become possible of accomplishment and the least of us has felt the joy and pride of participation in a great undertaking. Our respectful gratitude to him.

As this goes to the Press, I feel very much like the last runner in a relay-race who receives the pennant from his immediate predecessor and makes for the tape. All credit to those fore-runners who made this possible.

Lucknow
February 1966.

D. D. Joshi
Superintendent of Census Operations,

ACKNOWLEDGMENT OF ASSISTANCE

Sl. No. of Map	Title of Map	Source of Information
1	Position of Uttar Pradesh in India	(i) School Atlas of Survey of India
2	Administrative Divisions, 1961	(i) Survey of India (ii) District Officers, Uttar Pradesh
3	Changes in Administrative Boundaries, 1951-61	(i) Board of Revenue, Uttar Pradesh (ii) District Officers, Uttar Pradesh
4	Physiography	(i) National Atlas of India (Preliminary Edition) of the National Atlas Organisation (ii) Survey of India
5	Geology	(i) Geological Map of India, 1957 published by the Geological Survey of India
6	Minerals	(i) Geological Survey of India
7	Normal Monthly and Annual Rainfall	(i) Memoirs of the India Meteorological Deptt., Vol. XXXI Pt. III
8	Rainfall Reliability, 1901-50	(i) Registrar General, India
9	Rainfall Regions by Extent of Precipitation and Reliability	
10	Soils	(i) Forest Deptt. of Uttar Pradesh
11	Forests	
12	Forest Area	(i) Survey of India (ii) National Atlas of India (Preliminary Edition)
13	Distribution of Population, 1961	
47	Land Utilisation, 1960-61	(i) Board of Revenue, Uttar Pradesh (ii) Directorate of Agriculture, Uttar Pradesh
48	Intensity of Cropping, 1960-61	
49	Acreage under Major Cereals, 1960-61	
50	Acreage under Pulses and Oil Seeds, 1960-61	
51	Acreage under Commercial Crops, 1960-61	
52	Yield per Acre of Rice, Millet, Wheat and Pulses	(i) Chief Engineer, Irrigation Deptt., Uttar Pradesh (i) Directorate of Agriculture, Uttar Pradesh
53	Area Irrigated by Various Sources, 1960-61	
54	Major Irrigation Systems	(i) Directorate of Economics and Statistics, Uttar Pradesh (ii) Directorate of Agriculture, Uttar Pradesh
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Sl. No. of Map	Title of Map	Source of Information
102	Proportion of Rural Population living in Electrified Villages, 1961	(i) Uttar Pradesh State Electricity Board (ii) Electrical Inspector to Uttar Pradesh Government
109	Density of Surfaced Roads, 1961	(i) Public Works Department, Uttar Pradesh
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111	Availability of Surfaced Roads per 100,000 of Population per 1,000 Sq. Km. of Area, 1961	
112	Accessibility to Surfaced Roads, 1961	(i) Uttar Pradesh Road Map, 1961
113	Number of Passengers Originating per Route Kilometre per day on Railways, 1961	(i) General Managers of the Zonal Railways
114	Number of Motor Vehicles registered per 100,000 of Population, 1961	(i) Regional Transport Officers, Uttar Pradesh
135	Primary School Enrolment, 1961	(i) Directorate of Education, Uttar Pradesh
136	Primary School Enrolment of Boys, 1961	
137	Primary School Enrolment of Girls, 1961	
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144	Number of Teachers per 1,000 Students at the Secondary Level of Education, 1961	(i) Registrars of Universities, Uttar Pradesh
145	Number of Teachers per 1,000 Students at the University Level of Education, 1961	
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152	Number of Hospital Beds per 100,000 of Population, 1961	(i) Registrar General, India
153	Number of Medical Doctors per 100,000 of Population, 1961	(i) Directorate of Medical and Health Services, Uttar Pradesh

The external boundary on all maps agrees with the
Record/Master copy certified by the Survey of India.

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A. ORIENTATION

MAP No. 1
POSITION OF UTTAR PRADESH IN INDIA

Purpose

This map shows the geographical location of Uttar Pradesh in India.

Method

The area covered by Uttar Pradesh is shaded in the map. State capitals have also been shown. The main air-routes passing through the State are also indicated.

Salient Features

Uttar Pradesh is a land-locked State situated in the middle of the northern part of the country thus justifying its ancient name of *Madhya-des'a* and the present name of Uttar Pradesh. Its northern boundary forms the international boundary with China and Nepal; on the west lie Himachal Pradesh, Punjab, Delhi and Rajasthan, on the south Madhya Pradesh and on the east Bihar. For a long distance its western boundary is formed by the river Yamuna. The river flows inside the State in the hilly region of the north; at a point in Dehra Dun district it begins to form the western boundary and continues to do so until it re-enters the State in Mathura district. The tapering portion of the eastern boundary with Bihar as on 1.3.1961 is formed by the

Ganga and Ghaghara rivers which meet at the eastern-most extremity of the State. The northern boundary of the State runs first through the Himalayas and then eastward along their foot. The southern boundary of the State is very irregular. A large number of princely States used to exist south of Uttar Pradesh which have since been incorporated with Madhya Pradesh.

MAP No. 2
ADMINISTRATIVE DIVISIONS, 1961

Purpose

The map shows the administrative divisions of Uttar Pradesh, i.e., Revenue Divisions, Districts and Tahsils with their headquarters, as on the 1st March, 1961.

Method

The boundaries and headquarters of Revenue Divisions, Districts and Tahsils have been marked by different symbols and their names have been written against the location points. Where the name of a District and its headquarters differ, the former is shown within brackets, e.g., PAURI (GARHWAL). The administrative seat of the State has been indicated conspicuously by a star, viz., *LUCKNOW.

Salient Features

Uttar Pradesh forms part of the Central Zone, which includes Madhya Pradesh as well. The State is divided into 54 Districts grouped in 11 Revenue Divisions, namely, Uttarakhand, Kumaon, Rohilkhand, Meerut, Agra, Allahabad, Jhansi, Lucknow, Faizabad, Gorakhpur and Varanasi. These Districts are sub-divided into 231 Tahsils. With the following exceptions all Divisions/Districts/Tahsils and their headquarters are eponymous:—

Divisions: Uttarakhand (Naini Tal), Kumaon (Naini Tal) and Rohilkhand (Bareilly);

MAP No. 3
CHANGES IN ADMINISTRATIVE BOUNDARIES, 1951-61

Purpose

This map depicts the changes in boundaries of districts and tahsils which have occurred during the intercensal period 1951-61.

Method

The administrative boundaries of 1961 have been drawn in black and the area added to any tahsil during this period in red, within the tahsil concerned. Tahsils which have been created during this period are shown entirely in red. Changes too small to be shown accurately on a map of this size have been indicated by dots. Each has been given an index number explained in the relevant Table in the Appendix.

Salient Features

There has been practically no change in the State boundary during the decade. The area of the State is 294,947.6 sq. km. (113,879.4 sq. miles) as against the area of 293,952.8 sq. km. (113,495.3 sq. miles) recorded in 1951. This small difference is mainly due to the revised calculation of area.

Within the State, the most outstanding change has been the creation of three border districts of Uttar Kashi, Chamoli and Pithoragarh in 1960, which make the new Uttarakhand Division. Rawain tahsil of the old Tehri Garhwal district has been made into district Uttar Kashi and subdivided into four tahsils, viz

B. PHYSICAL CONDITIONS

MAP No. 4

PHYSIOGRAPHY

Purpose

This map depicts the physical features of Uttar Pradesh.

Method

Heights are shown by colour-tints and rivers in blue.

Salient Features

The map brings out three distinct physiographic regions: (A) Northern Mountains, (B) Southern Hills and Plateau, and (C) Ganga Plain. The bulk of the State falls in the third region.

(A) *Northern Mountains*—The lofty Himalayas embrace Uttar Kashi, Chamoli, Pithoragarh, Tehri Garhwal, Garhwal and Almora districts, Naini Tal tahsil of Naini Tal district and Chakrata and part of Dehra Dun tahsils of Dehra Dun district in the north, covering about one-sixth of the total area of the State. The Himalayas rise from a height of 300 metres to a magnificent series of snow-clad peaks more than 6,000 metres above the mean sea level, in the north. Within this north-south stretch there are three well-marked divisions (a) the Sub-Himalayas, i.e., the Siwalik Range, (b) the Lesser Himalayas and (c) the Greater Himalayas.

flow into the Ganga. The Yamuna with its tributaries joins the Ganga at Allahabad, and the Ghaghara with all its accumulated waters near Ballia.

Natural Divisions

Uttar Pradesh can be divided into the following seven natural divisions:—

(1) *Himalayan*—As noted before, it comprises Uttar Kashi, Chamoli, Pithoragarh, Tehri Garhwal, Garhwal and Almora districts, tahsil Naini Tal of Naini Tal district, and Dehra Dun district.

(2) *Sub-Himalaya West*—Comprising districts Saharanpur, Bijnor, Rampur, Bareilly, Pilibhit and Kheri and tahsils Haldwani, Kashipur and Kichha of Naini Tal district.

(3) *Sub-Himalaya East*—Comprising districts Bahraich, Gonda, Basti and Gorakhpur and part of district Deoria.

(4) *West Plain*—Comprising districts Moradabad, Budaun, Shahjahanpur, Muzaffarnagar, Meerut, Bulandshahr, Aligarh, Mathura, Agra, Etah, Mainpuri, Farrukhabad and Etawah.

(5) *Central Plain*—Comprising districts Kanpur, Fatehpur, Sitapur, Hardoi, Unnao, Lucknow, Rae Bareilly, Bar

MAP No. 5
GEOLOGY

Purpose

This map shows the divisions of Uttar Pradesh by geological periods.

Method

Areas relating to different geological periods are indicated by different signs explained in the Index. For simplicity, the periods are grouped into broad divisions.

Salient Features

The three broad geological divisions of the State are conterminous with the three broad physical divisions. The Vindhyan Hills and Plateau division in the south is the oldest and the most stable land mass. It has never been under water ever since the beginning of geological history. It is generally composed of horizontal rockbeds resting on firm foundation. Some of the oldest rocks of the earth's outer shell, i.e., Archaean granites and gneiss are exposed in Bundelkhand. Famous Bundelkhand gneiss looks a typical pink granite. There is no development of any important mineral in it, but is traversed by dykes and sills of coarse-grained diorite. The Dharwarian and the Vindhyan are the two important systems of rocks in this region. They contain rocks of much economic importance. Dharwarian rocks in the middle part of Mirzapur district are the source of important metallic minerals and the Vindhyan system spread over tahsils Kiraoli and Kheragarh of Agra district,

Lalitpur of Jhansi district, Karwi and Mau of Banda district, Meja and Karchhana of Allahabad district, Mirzapur and Robertsganj of Mir

MAP No. 6
MINERALS

Purpose

This map shows the distribution of minerals in the State and also marks deposits which are being operated at present.

Method

All the minerals have been divided into two categories, i.e., minerals for metallurgical use and minerals for other uses. They have been shown by different symbols.

Salient Features

On the whole, this State is not fortunate in regard to mineral deposits. Whatever are found are concentrated in the eight northern Himalayan districts, viz., Uttar Kashi, Chamoli, Pithoragarh, Tehri Garhwal, Garhwal, Almora, Naini Tal and Dehra Dun and the six southern districts, viz., Agra, Jhansi, Hamirpur, Banda, Allahabad and Mirzapur. Important minerals found in the State are noted below:—

Limestone—Sufficient reserves of limestone exist in the exposed portion of the limestone escarpment in the Ghaggar valley near Markundi in Mirzapur district, in the Dehra Dun-Mussoorie block, and in the Nilkanth area of Garhwal district. The limestone deposits near Markundi are being utilised in the manufacture of cement at the Government Cement Factory at Churk. The deposits of Dehra Dun-Mussoorie block are being extensively exploited by private parties for sugar and paper industries. Annual production of limestone from 1955 to 1961 is shown in the bar diagram.

MAP No. 7
NORMAL MONTHLY AND ANNUAL RAINFALL

Purpose

This map shows the distribution of normal annual rainfall in Uttar Pradesh and monthly rainfall at some representative stations.

Method

The normal rainfall based on records of 50 years ending with 1950 has been taken for each tahsil headquarters, excepting those of districts Uttar Kashi, Chamoli, Pithoragarh, Tehri Garhwal and Rampur due to non-availability of data. Isohyetal lines are drawn joining the places having equal amounts of rainfall. The space between isohyets has been hatched to depict rainfall ranges. The lines in the mountainous tract give only an approximate idea of the general distribution.

The mean monthly rainfall has been shown by a histogram near each of the selected stations. Vertical columns of the histogram, read from left to right, indicate the amount of rainfall in each month from January to December.

Salient Features

Situated far from ocean influence, Uttar Pradesh receives only an ordinary amount of rain water. Barring the northern mountainous parts for which adequate observational data are lacking, the average rainfall for the remaining major part of the State is 940 millimetres and the average number of rainy days 44.7. The largest amounts of rainfall are to

be found in the valleys of

MAP No. 8
RAINFALL RELIABILITY, 1901-50

Purpose

This map gives an indication of the extent of reliability of annual rainfall in different regions of Uttar Pradesh.

Method

Reliability of rainfall is inversely correlated to its variability. There also exists a relationship between the amount of rainfall and its reliability. Therefore, the degree of variability has been inversely taken to indicate the extent of reliability. The annual rainfall data of 29 stations in the State representing the different areas have been used to calculate the coefficients of variability (CV) by the formula : $CV = \frac{\delta}{M} \times 100$, where δ is the Standard Deviation and M the mean annual rainfall for 50 years. On the basis of the coefficients so calculated isopleths have been drawn delimit-

ing the areas with slightly low, moderate, slightly high and high reliability.

Salient Features

With the exception of a few areas, the variability of annual rainfall is on the high side in the entire West Plain, the Central Plain and Vindhyan Hills and Plateau. Within them the area enclosed by the 30 per cent variability line in the south-west extending up to Kheri and Gonda can be deemed to be the area of lowest reliability. It comprises the whole of districts Aligarh, Mathura, Agra, Etawah, Kanpur, Jalaun, Sitapur and Hardoi and parts of districts Bulandshahr, Etah, Mainpuri, Farrukhabad, Shahj

MAP No. 11

FORESTS

Purpose

The map shows the distribution of forest types in Uttar Pradesh.

Method

The different types of forests have been depicted by symbols in the map.

Salient Features

The natural vegetation of Uttar Pradesh, except on the higher mountains, is essentially aboreal. Some 35 thousand sq. km. or 11.9 per cent of the total area of the State is under forest. Originally, there was a larger area under forests but it has been gradually cleared off in the Sub-Himalayan and Plain regions for agriculture and settlement purposes. In the plains, the woodland area is almost confined to riverine strips.

Himalayan

The Himalayan Hills are largely under forest cover producing valuable timber. Alpine forests of pines, birches, junipers, silverfirs, etc. abound on high altitudes in Uttar Kashi district. Below them on the slopes throughout the entire length of Himalayas are the temperate forests interspersed with sub-tropical *chir* at places which completely takes

over further down below 6,000 feet. Temperate forests are the mixture of conifers and broad-leaved species. Conifers grow well on

MAP No. 12
FOREST AREA

Purpose

This map depicts districtwise area under forests in 1961 as also its proportion to the total area.

Method

Pi-graph depicts total forest area. The white sector therein denotes reserved forest area. The space outside the circle is hatched according to the range in which the percentage of forest area to the total area falls. Seven ranges have been chosen.

Salient Features

The forest area under the control of the State Forest Department was 35,162 sq. km. (13,576 sq. miles) in 1960-61, which is 11.9 per cent of the total area of the State. Out of it, 69.7 per cent was under reserved forests, 5.4 per cent under protected forests and the remaining 24.9 per cent under unclassified forests.

Almost the entire forest area is confined to the Himalayan Hills natural division, the

Sub-Himalayan belt, Vindhyan Hills and Plateau and a few riverine strips in the plains. The largest proportion of area under forests is in Uttar Kashi district (83.9 per cent) followed by Tehri Garhwal (68.6 per cent), Naini Tal (51.9 per cent) and Dehra Dun (50.0 per cent) districts. In the Himalayan Hills, the percentage is lowest in Pithoragarh (3.9 per cent),

C. DEMOGRAPHIC STRUCTURE AND TRENDS

MAP No. 16
CHANGING PATTERN OF DENSITY OF POPULATION, 1951-61

Purpose

These two maps set together facing each other afford a visual comparison of the density of population in 1951 and 1961 in the districts of Uttar Pradesh.

Method

Densities have been worked out on area figures supplied by the Board of Revenue in all cases except districts Uttar Kashi, Chamoli, Pithoragarh, Tehri Garhwal, Garhwal and Almora, for which Surveyor General's figures have been used. Districts have been hatched according to the range in which they fall. In

both the maps the ranges and hatching are the same.

Salient Features

The density of population in Uttar Pradesh has increased from 214 persons per sq. km. in 1951 to 250 in 1961, while in India it increased from 122 to 148 during the same period. The percentage increase of population during the decade is lower in Uttar Pradesh (16.7) than in the country as a whole (21.4).

Nowhere in the State the density has fallen during the last decade and the overall pattern of distribution has remained almost unchanged.

As is quite evident

MAP No. 17
INTERCENSAL CHANGE IN POPULATION, 1901-21

Purpose

Most aptly 1921 has been called the year of 'the Great Divide'. The period comprising two decades 1901-21 witnessed the worst epidemics and World War I which completely offset the natural growth of population in nearly the whole of the State. This map intends to depict the degree of impact of these natural calamities over the different parts of the State to serve as a starting point for further study of subsequent growth.

Method

The districtwise changes in population during 1901-21 with the 1901 population as base, have been grouped into six ranges, 3 on the higher and 3 on the lower side of the base year. The districts have then been hatched in three graded shades of two colours—black for gains and red for losses.

Salient Features

The population of the State during these two decades registered a fall from 48.6 million

in 1901 to 46.7 million in 1921, the percentage decrease being 4.02. Three-fourths of this loss occurred during 1911-21.

Among districts only 16, namely, Dehra Dun, Uttar Kashi, Tehri Garhwal, Pithoragarh, Almora, Chamoli, Garhwal, Deoria, Gorakhpur, G

MAP No. 27
CHANGING PATTERN OF SEX RATIO, 1951-61

Purpose

The two maps set together opposite each other indicate the variation in the sex ratio during 1951-61 in each tahsil of the State.

Method

In both the maps all tahsils have been grouped according to their sex ratio (females per 1,000 males) into 7 ranges, 3 above and 4 below 1,000, and hatched in seven graded shades. Those having sex ratio above 1,000 are hatched in red and those below 1,000 in black. The ranges and pattern of hatching in the two maps are identical for direct comparability.

Salient Features

The ratio has remained almost static during 1951-61 at the State level. As against 910

in 1951 it has slightly dipped down to 909 in 1961. Among tahsils, however, the position is different. About half of them have registered a fall, the largest occurring in Unnao (886-832), Robertsganj (966-918) in Mirzapur district, and Rampur (903-858). Others display an upward trend, the greatest rise being in Shahabad (842-1,047) in district Rampur, Pratapnagar (1,201-1,351) in district Tehri Garhwal, and P

MAP No. 43
CHRONOLOGICAL DISTRIBUTION OF TOWNS WHICH LOST URBAN STATUS IN ANY
OF THE YEARS, 1901-61

Purpose

This map shows towns which lost their urban status in any of the years 1901-61.

Method

All such towns are represented by circles of equal size drawn at their location points. They have been shaded in 7 colours corresponding to the seven Census years 1901-61 in which they lost their urban status. The central point of each circle indicates the year of origin. In the case of a town declassified more than once, the earlier year(s) have been shown by a smaller concentric circle with circumference coloured in appropriate shade(s).

Salient Features

At each Census, some of the towns of earlier Censuses were declassified as rural due to non-fulfilment of the then urban definition.

The largest reduction in the number of towns has occurred at the 1961 Census when as many as 222 towns of the 1951 Census lost their urban status. Majority of them had been continuing as urban right from 1901. Obviously, chronology is directly related to the changing definition of a Census town and not to any innate change in the urban character of a place.

A very small number of towns lost their urban status at earlier Censuses. In

D. ECONOMIC ASPECTS

