1951

CENSUS REPORT

ÍNDIA
CENSUS OF INDIA, 1951

VOLUME I

INDIA

PART I-A — REPORT

R. A. GOPALASWAMI,
OF THE INDIAN CIVIL SERVICE,
Registrar General, India and ex-officio Census Commissioner for India
Price

<table>
<thead>
<tr>
<th></th>
<th>Deluxe</th>
<th>Ordinary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part I-A — Report</td>
<td>Rs. 10/- or 16 sh.</td>
<td>Rs. 3/- or 5 sh.</td>
</tr>
<tr>
<td>Part I-B — Appendices</td>
<td>Rs. 10/- or 16 sh.</td>
<td>Rs. 3/- or 5 sh.</td>
</tr>
<tr>
<td>Parts I-A &amp; I-B (combined)</td>
<td>Rs. 15/- or 23 sh. 6 d.</td>
<td>Rs. 5/- or 8 sh.</td>
</tr>
</tbody>
</table>
FEW PEOPLE OUTSIDE realise that census is an administrative operation of great dimensions and, in addition, it is a scientific process. Indian census, in particular, covers the largest population in the world and it is also one of the most economical administrative operations. Census as an institution goes back to the remote past, but it is no longer a mere counting of heads; it involves extraction of information which plays a vital role in the determination of many of our administrative policies. The facts elicited during the course of this operation yield valuable scientific data of sociological importance. In many matters it provides a useful guide for the effectiveness or otherwise of our economic policies. The theory of population is in itself an interesting part of economics. The census helps us to test and adapt that theory to facts.

— Sardar Vallabhbhai Patel
From
Shri R.A. Gopalaswami, I.C.S.,
Registrar General, India; and
ex officio Census Commissioner for India

To
The Secretary to the Government of India,
Ministry of Home Affairs,
New Delhi

Sir,

I have the honour to submit herewith my report on the 1951 Census.

Yours faithfully,

R. A. Gopalaswami,
Registrar General, India; and
ex officio Census Commissioner for India
INTRODUCTION

I. The 1951 Census Reports—The reports on the 1951 Census are issued in 17 volumes, which are divided into 63 parts. The first of these volumes contains the All-India Census Report. It is divided into five parts entitled:

PART I-A—REPORT;
PART I-B—APPENDICES TO THE REPORT;
PART II-A—DEMOGRAPHIC TABLES;
PART II-B—ECONOMIC TABLES (General Population);
PART II-C—ECONOMIC TABLES (Rural and Urban Population).

The other volumes which are divided into 58 parts, contain the State Census Reports. These are prepared by my colleagues—the Superintendents of Census Operations—in different states as shown below:

<table>
<thead>
<tr>
<th>Name of Superintendent</th>
<th>Volume number</th>
<th>Number of parts</th>
<th>Name of state(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shri Rajeshwari Prasad, I.A.S.</td>
<td>II</td>
<td>5</td>
<td>Uttar Pradesh</td>
</tr>
<tr>
<td>Shri S. Venkateswaran, I.C.S.</td>
<td>III</td>
<td>3</td>
<td>Madras and Coorg</td>
</tr>
<tr>
<td>Mr. J. B. Bowman, I.C.S.</td>
<td>IV</td>
<td>3</td>
<td>Bombay, Saurashtra and Kutch</td>
</tr>
<tr>
<td>Shri Ranchor Prasad, I.A.S.</td>
<td>V</td>
<td>3</td>
<td>Bihar</td>
</tr>
<tr>
<td>Shri Asok Mitra, I.C.S.</td>
<td>VI</td>
<td>6</td>
<td>West Bengal and Sikkim</td>
</tr>
</tbody>
</table>

*All reports except the following have been or are being published:

(f) The following parts of reports are in the press:

|Bombay|PART I|PART II-A|PART II-B|PART II-C|PART II-D|PART II-E|PART II-F|PART II-G|PART II-H|PART II-I|PART II-J|PART II-K|PART II-L|PART II-M|PART II-N|PART II-O|PART II-P|PART II-Q|PART II-R|PART II-S|PART II-T|PART II-U|PART II-V|PART II-W|PART II-X|PART II-Y|PART II-Z|
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|

Footnote continued
2. District Census Handbooks—In addition to the All-India Census Report and the State Census Reports, 307 District Census Handbooks have been compiled by my colleagues. Each handbook relates to one district.

<table>
<thead>
<tr>
<th>District/Civil Service</th>
<th>Part</th>
<th>Tables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madhya Pradesh</td>
<td>VII</td>
<td>6</td>
</tr>
<tr>
<td>Punjab, PEPSU, Delhi, Himachal Pradesh and Bilaspur</td>
<td>VIII</td>
<td>4</td>
</tr>
<tr>
<td>Rajasthan and Ajmer</td>
<td>IX</td>
<td>4</td>
</tr>
<tr>
<td>Orissa</td>
<td>XI</td>
<td>3</td>
</tr>
<tr>
<td>Assam, Manipur and Tripura</td>
<td>XII</td>
<td>4</td>
</tr>
<tr>
<td>Travancore-Cochin</td>
<td>XIII</td>
<td>3</td>
</tr>
<tr>
<td>Mysore</td>
<td>XIV</td>
<td>2</td>
</tr>
<tr>
<td>Madhya Bharat and Bhopal</td>
<td>XV</td>
<td>4</td>
</tr>
<tr>
<td>Vindhya Pradesh</td>
<td>XVI</td>
<td>2</td>
</tr>
<tr>
<td>Andaman and Nicobar Islands</td>
<td>XVII</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: The following parts of reports are under preparation or nearing completion:

- Uttar Pradesh: Part I-A, Report
- Bihar: Part I, Report and Subsidiary Tables
- Hyderabad: Part I-A, Report
- Mysore: Part I, Report and Subsidiary Tables
- Madhya Bharat: Part I-A, Report
- Andaman and Nicobar Islands: Report and Tables
separately and contains all the 1951 Census statistics relating to different local areas within the district as well as the basic totals of population (by eight separate livelihood classes) for every village and every ward of every town in the district. The handbooks (which are issued as State Government publications) also include other items of information relating to the districts which could be readily assembled and seemed likely to be useful for purposes of reference. One hundred and twelve District Census Handbooks have been published already and the others are in the press.

3. Census of India brochures—It will be noted that the statistical information contained in the All-India Census Report is limited to demographic and economic data relating to the country as a whole. Other types of data are published separately in a series of brochures. These are self-contained papers, which present the relevant statistics with the minimum of introductory information required for their proper understanding and use. This series of brochures also includes a summary of demographic and economic data which it was found necessary to make available to the public in advance of the main report, as well as some which are of a specialised nature.

The following brochures have been published already:

(i) Final Population Totals;
(ii) Population Zones, Natural Regions, Sub-Regions and Divisions;
(iii) Sample Verification of the 1951 Census Count;
(iv) Religion;
(v) Summary of Demographic and Economic Data; and
(vi) Special Groups.

The following brochures are in the press:

(i) Maternity Data;
(ii) Languages;
(iii) Displaced Persons;
(iv) Age Tables;
(v) Life Tables;
(vi) Literacy and Educational Standards; and
(vii) Subsidiary Tables.

4. Cost—These are the end-products of the 1951 Census. The total cost involved cannot be stated exactly until after next year. But as most of the expenditure is known, the total can be estimated fairly closely. It is reckoned that the Central Government will have spent 149 lakhs of rupees in all on the 1951
Census. This works out to a sum of Rs. 41/12 per 1,000 persons enumerated. The corresponding rate for the 1931 Census (the last census for which full tabulation was undertaken) was Rs. 15/8. The rise in the unit cost is smaller than the increase which has occurred in the general level of prices, wages and salaries since 1931.

5. Preparation—The system of census-taking in India is somewhat unusual. It used to be likened in the past to the phoenix—the only bird of its kind which is reputed to complete its life-cycle by burning itself on the funeral pile and then to rise from the ashes with renewed youth to live through another cycle. Mr. M. W. M. Yeatts described it in somewhat less complimentary terms as follows:

"The system, if that word can be used here, is in brief that every 10 years some officer is appointed to conduct a census and officers to work under him are appointed in each province. The states take corresponding action. These appointments are made at the minimum of time beforehand and within one year questionnaires have to be settled, the whole country divided into enumeration units, a hierarchy of enumeration officers created and trained, millions of schedules or slips printed and distributed over the face of the country, the whole process of enumeration carried out and checked, tabulation then carried out in offices located in any old place that can be found, on make-shift pigeon-holes and furniture and with temporary staffs, rushed through the presses—and then, in the third year the whole system is wound up, the officers and the office staffs are dispersed and India makes haste to discard and forget as soon as possible all the experience so painfully brought together."

Shortly after the transfer of power, Government decided to put an end to this reproach. The action taken by Government was described in the following terms by the late Sardar Vallabhbhai Patel, then Home Minister, when he inaugurated the first Census Conference:

"Ever since I assumed charge of the Home Ministry, I have been taking some interest in census matters and I was really very happy to have been instrumental in placing on the Statute Book a permanent enactment dealing with the whole operation of Census........

"Hitherto, the Census used to be looked upon as a decennial operation for which haphazard temporary arrangements used to be made. I have already stated that there is now a permanent Census Act on the Statute Book and Government have already a permanent office of the Registrar General and Census Commissioner. It is our
intention through this unified organisation to effect continuous improvement over the whole field of population data including the Census and vital statistics and to conduct experiments in sampling which would reduce not only the elaboration of these operations but also the cost.”

Mr. YEATTS, who had taken part in the 1931 Census as the Superintendent of Census Operations in Madras and directed the 1941 Census as Census Commissioner for India, was appointed Registrar General and ex-officio Census Commissioner. Thanks to these arrangements, it was possible to begin advance planning for the 1951 Census somewhat earlier than at former censuses. A provisional questionnaire was drawn up; printing of census slips was taken in hand; a general outline of the scheme of operations was drawn up; and the officers were selected and earmarked for appointment as state census superintendents. Then, Mr. YEATTS fell ill and went on leave. I took charge of the census preparations in November 1949 as a temporary leave arrangement, in addition to my other duties in the Ministry of Home Affairs. Unfortunately, Mr. YEATTS died in August 1950, when his responsibility devolved on me entirely.

A definite stage in the preparatory period was reached during the last week of February 1950, when the newly appointed state census superintendents met in conference. We discussed the work before us in all aspects and achieved an agreed understanding of our tasks. Final orders of Government were obtained on the dates to be fixed for the census and on certain issues of policy affecting the scope of census enquiries. The questionnaire was finalised, as also a set of model all-India instructions. Detailed local instructions were prepared by my colleagues in all the local languages. Census charges were delimited in every district, divided into census circles and sub-divided into census blocks—the ultimate territorial unit for purposes of census enumeration. The census workers were selected and allotted to their respective charges, circles and blocks. They were supplied with forms and stationery, given oral as well as written instructions, practised and tested. During the first week of February 1951, when the preparatory phase ended, a temporary organisation consisting of about 7 lakhs of field workers was got ready for action. The exact numbers, according to reports received, were as follows: 5,93,518 census enumerators, grouped under the supervision and guidance of 80,006 census supervisors, themselves directed by 9,854 census charge officers.

6. Enumeration—The nature of the work entrusted to the field workers is clearly described in a message which was sent to them on the eve of
"Dear colleagues in the Census work! This is the first census held under orders of the Republic of free India. I am addressing the enumerators in particular. You have the privilege and honour of taking a hand in the first census of free India. Ten years hence the next census will be held. Yours is the earliest privilege. You are an enumerator and therefore you build the very base of the whole big structure: The base is, as you know, the most important part of any structure. The record of your work will remain carefully kept for use throughout the next ten years.

"Enumeration begins at sunrise on the 9th day of February. From then up to sunrise on the 1st March you will be visiting all the houses in your block, locating all the people for whose enumeration you are responsible; and ascertaining and recording, in respect of all of them, the replies which are given to you for the prescribed census questions. On the 1st, 2nd and 3rd days of March you will re-visit all the houses for final check. You will then make sure that you have prepared the record of census enumeration in all respects as instructed, and hand it over to the supervisor.

"Yours is not an isolated local inquiry. You are one of about six hundred thousand patriots, all of whom will be engaged on an identical task at the same time. All of you are jointly responsible for enumerating all the people. Collectively you will prepare a record of basic facts relating to the life and livelihood of all the citizens and families in our Republic.

"If this record is to be correct and complete, the part which you contribute should, in itself, be correct and complete. You should master the simple instructions which you have received, and apply them uniformly and conscientiously. These instructions are based on a common plan for the country as a whole. Like a swarm of bees that build a beautiful hive according to the laws of geometry, each doing its part in obedience to a mystic urge, you should do your part according to conscience and the sense of truth inherent in us all.

**IMPORTANT THINGS TO REMEMBER**

"*First,— EVERY PERSON SHOULD BE ENUMERATED ONCE, AND NOT MORE THAN ONCE. Most people would be enumerated at their usual
place of residence. There are a few who should be enumerated wherever they are found.

"Secondly,—Do not grudge the time and effort which will be necessary to get correct and complete answers to the questions relating to ECONOMIC STATUS AND MEANS OF LIVELIHOOD.

"I do hope you will take pride over the quality of your contribution to this nation-wide enterprise and do your best. GOD BLESS YOU!"

During the last 21 days of February 1951, 6 lakhs of census workers visited 644 lakhs of occupied houses and made enquiries. The information supplied to them by about 7 crores of citizens was recorded in 3,569 lakhs of census slips each of which was a dossier of one person. Then or later the more important items of the information contained in these dossiers were transcribed in the National Register of Citizens of which one part is allotted to every village and every ward of every town. The Register shows all the occupied houses and households arranged in numerical order; and against each household every line records the information relating to one member of the household.

The census slips and the National Register of Citizens were the record of basic information collected during the 1951 Census. We ascertained the following particulars in respect of every person who was enumerated:

(i) Name, relationship to head of household, birth-place, sex, age and marital status;

(ii) Household economic status, employment status (if any), principal means of livelihood and subsidiary means of livelihood (if any); and

(iii) Nationality, religion, membership of 'special group'* (if any), mother tongue, bilingualism (if any), literacy and educational standard, and particulars of displacement (for displaced persons only).

In addition to these items which were common to all parts of India one other item was prescribed in each state by the State Government concerned.

7. Tabulation—The second phase of census operations, viz., enumeration ended with the second visit to all houses carried out during the first three days of March and the report by the field workers of the number counted by them. These reports were transmitted from the block, circle and charge, through the district administrative hierarchy, to state census superintendents and to me, and the 'Provisional Totals' based on them published during the second fortnight of April 1951 for districts, states and the country as a whole. The third phase commenced during April–May 1951, with the opening of 52 temporary tabulation

---

*This relates to Scheduled Castes, Scheduled Tribes, Anglo-Indians and certain classes treated provisionally as 'backward' for purposes of the Census.
offices, sited at convenient centres in all parts of the country; and the arrival at these offices of the census slips and National Register of Citizens together with abstracts and relevant information prepared by local officers.

The manner in which these offices were to be organised, workers recruited and trained, and the nature of the work to be performed in these offices had been planned in advance. The main principles were discussed and settled in a conference held during the last week of December 1950. Very detailed instructions designed to secure rigid uniformity of forms and procedures as well as safeguards against error had been settled and issued.

There were three stages in the working of these offices. The first was 'sorting and compilation' at the end of which, the numbers relating to each item of information were extracted from the census slips by sorters on what are called 'sorter's tickets' and then put together by compilers in 'posting statements' for the smaller territorial units within each district. This was the most important stage of tabulation. It was also the most expensive since the tabulation offices were at maximum strength while it was in progress. According to detailed information available about all the 52 offices except one (Hyderabad) for which figures are not available, 47,218 man-months were used up in this process of sorting and compilation. It took 10.4 sorter-months, 2.4 compiler-months and 1.1 supervisor-months to sort and compile the dossiers of one lakh of people.†

The second stage of tabulation consists in processing the compilers' posting statements into the main census tables in the form prescribed for all states; the institution of arithmetical checks and counter-checks for avoidance of error; and finally their scrutiny and independent check in a central tabulation office set up within my office. The final tables are then prepared for the press and go out as separate parts containing purely statistical material with brief introductions and explanations.

The third stage of tabulation consists in the preparation of what are called 'subsidiary tables' and constitutes statistical preparation for the next phase—viz., study and report. The aim at this stage is two-fold. One is to work out derivative data such as rates and percentages so as to institute comparison between the 1951 Census data and the corresponding data of previous censuses. The other is to work out the inter-connections between the census data and other important data (these are mainly vital statistics and cultivation statistics). Here

† In other countries, electrically operated machinery is used at this stage, thus rendering the employment of a large staff unnecessary. A proposal that such machinery should be used at this census in order to carry out a part of the work was considered carefully and decided against, on the ground that it would certainly increase the cost and, in all probability, take more time. Subsequent experience has not indicated any reason to regret the decision to rely entirely on human agency.
again, identical forms and instructions were prescribed in advance. A special difficulty of a fairly formidable character was presented by the fact that the boundaries of India as well as of almost all states and a great many districts had undergone very extensive changes after the 15th August, 1947. All the relevant statistical data of earlier years had to be recomputed for the new territorial units; and the manner in which this was done had to be clearly explained. The three stages mentioned above are applicable to the work done in the tabulation offices controlled by my colleagues. The second and third of these three stages were reproduced in the central tabulation office, where the all-India tables were prepared on the basis of state tables which had been checked in this office and approved for publication.

8. Study and Report—It has been a regular feature of all previous censuses (except that of 1941 when practically all tabulation except the basic population totals and community totals was dispensed with) that the census organisation did not content itself with the bare presentation of statistical data. The data were subjected to careful study and the results of the study were embodied in narrative reports of quite considerable length. Three broad purposes were sought to be served by such study:

*First,*—It was necessary to assess the value, in terms of completeness, reliability and comparability of the data procured and furnish such comments and explanations as would be helpful to users of census statistics. The officers who trained the field staff and scrutinised the basic record in the various stages of tabulation were in the best position to do this work;

*Secondly,*—Much of the material collected at successive censuses is of an identical nature or at any rate relatable and comparable. A comparative study, with the help of the subsidiary tables already mentioned, helped to bring out evidence of changes in various characteristics which were usually important and significant either directly as matters of public interest or as the raw material for more specialised economic and social enquiries which might be undertaken by others; and

*Thirdly,*—There are a great many topics of interest relating to the social and economic life of the people. Where the officers in charge of census operations were specially interested in any of them, they were in a position to collect and study the relevant data along with the routine study referred to above and the results were set out in the form of specialised discussion of such topics.
The Census Commissioner and the Superintendents are chosen primarily with reference to their intimate knowledge of the administrative machinery whose services are required to be mobilised as well as their capacity for general management of staff employed on governmental duties, rather than for any specialised knowledge or aptitude for making statistical computation or for carrying out economic and social research. The quality of the result achieved by their study was, therefore, of a varying nature. Almost all reports were characterised by their painstaking thoroughness, while the intellectual standard set by some reports was conspicuously high.

Careful consideration was given, on this occasion, to the question whether precedent should be followed at all or whether the census organisation might content itself with bare presentation of statistical material. The conclusion was reached that it was essential that the first and second of these three purposes should be secured as satisfactorily as possible within the time, and that the officers should exercise their discretion in respect of the third. In one respect, however, a departure from precedent was clearly stipulated from the outset. The 1951 Census was not to concern itself with questions regarding races, castes and tribes—except in so far as the necessary statistical material relating to 'special groups' was to be published and certain other material relating to backward classes collected and made over to the Backward Classes Commission. On the other hand, it was also enjoined that the maximum possible attention should be paid to economic data. The instructions which were issued to state census superintendents about the preparation of state census reports indicated the general structure required, and concluded with a statement of objective in the following terms:

"It does not matter if available material does not permit of analysis sufficiently definite for reaching conclusions.......... It does not also matter if the time available to reporting officers is insufficient for carrying out even such analysis as may be permitted by the material. What is essential is that the prescribed subsidiary tables should be correctly prepared and the reporting officers should apply their mind to these tables and attempt a review on the lines indicated, ..........The reports thus prepared will be of value mainly as the starting point of more detailed studies (to be undertaken subsequently) of the inter-relationships of population changes and economic changes in the country as a whole, as well as in the different states and natural divisions of the country. If this purpose is served, reporting officers will have discharged their duty."

All state census superintendents have been proceeding on these lines generally in preparing their reports. It should be emphasised here that the
views expressed in these reports written by different officers are of a purely personal nature. They should not be regarded as committing Government in any manner to any particular expression of opinion on controversial issues of any kind.

While the study of census data organised on the lines above described was proceeding, public interest in the population problem was increasing rapidly. The Planning Commission took cognisance of the subject and initiated group discussions in which I also took part. The report of the Planning Commission embodies specific proposals and visualises the collection of data bearing on the problem, partly as the basis for action by Government and partly as material for consideration by a Commission, the setting up of which is mentioned as a possibility.

In these circumstances, I felt that an all-India report on the 1951 Census would be materially incomplete, if it failed to deal adequately with the population problem of the country. I have accordingly set out a clear and full statement of my own personal appreciation of the problem and what I conceive to be the correct solution. As explained already the views expressed in the report are of a purely personal nature and should not be understood to commit Government in any manner whatsoever.

9. Arrangement of the All-India Report—The All-India Report, as already mentioned, is divided into five parts. Three of these parts (Parts II-A, II-B and II-C) consist of statistical tables, accompanied by introductory notes which explain the manner in which the data were secured and the tables were compiled.

Part I-A is the narrative report proper and Part I-B consists of the Appendices. The report is divided into five chapters. The first three chapters present the picture as observed in 1951.

The first chapter, entitled "The Land and the People—1951" focuses attention on the area of land per head of population available in the country as a whole, describes how this varies in different parts of the country and how this variation is relatable to variations in topography, soil and rainfall. After dividing the country into 5 natural regions and 15 sub-regions in terms of these factors, a description is given of the salient facts of population and land use in three groups of sub-regions which are distinguished from one another as high, low and medium density sub-regions. Finally a comparison is instituted, with other countries of the world which leads to the conclusion not only that there is a very notable shortage of 'land area per capita' in our country but that the utilisation of usable land within this
limited area has proceeded very far already. A great deal of statistical information—in parts newly ascertained—has been brought together in APPENDIX I (Population and Land Use) and used as the basis for the account given in the first chapter.

The second chapter is headed “The Pattern of Living—1951”. It begins with an account of total numbers and numbers in different size-groups of villages and towns and the distribution of the people among them. Then there is a description of houses and households—information regarding the relative proportion of households of different size-groups as well as their composition being a new feature of this census. This is followed by a description of the variations of the sex ratio in different parts of the country. The age-structure of our people is then described and compared with that of other countries of the world. The last two sections of this chapter contain much material which is both new and important. It is well-known that data based on registration of births and deaths are both incomplete and defective. But a serious and largely successful attempt was made on this occasion to put them to the fullest use by separating the grain from the chaff and studying them in combination with census data and all other data which were capable of throwing some light on the subject. A systematic study of the whole subject is contained in APPENDIX II (Note on Birth Rates and Death Rates). As a result of this study, reasonably firm conclusions are reached regarding the levels (which prevailed during the decade ending 1950), of our true birth rates and death rates (as distinguished from our registered birth rates and death rates). Estimates are furnished not only for India as a whole, but six broad zones (North India, East India, South India, West India, Central India and North-West India); and they are then compared with similar rates of other countries. The information presented in the last section of this chapter entitled ‘Maternity Pattern’ is even more important. Thanks to the wise use made by certain State Governments of the ‘local option’ given to them to put one question of their choice, very valuable data have been secured about the average number of children born to mothers of different age-groups. Careful analysis of the data thus secured has yielded, for the first time, a clear picture of the pattern of maternity in this country and permits a comparison with the corresponding pattern in other countries. These statistics have led me to a new form of presentation of the solution for the population problem which, I believe, offers definite practical advantages. These are explained in the last chapter.

The third chapter entitled “Livelihood Pattern—1951” begins with the ‘India Picture’. It contains a complete accounting of how the people obtain their means of livelihood. The next section explains how the pattern varies from one zone to another. The last section brings out the main
features of contrast between the pattern in India and the pattern in Great Britain and the United States of America. The account given in this chapter is furnished in as simple terms as possible; but serious students are sure to have very exacting standards of precision in respect of definitions and classifications. In order to meet their needs, a systematic review of a more formal nature has been prepared and included in the report as APPENDIX III (Review of Census Economic Data). In this review a full account is given of the pitfalls to be avoided in instituting comparison of the data between one part of the country and another for the same census, and between two different censuses for the same territory, and the limitations subject to which it is possible to draw significant conclusions.

The fourth chapter is headed "Before and Since 1921". This, like the three previous chapters, is strictly factual; but it lays the foundation on which the assessment of the population problem presented in the last chapter is subsequently erected. It is a fundamental conclusion of the study—of which the results are set out in this report—that 1921 is the 'Great Divide'. Our pattern of growth subsequent to that year is entirely unlike the pattern of growth before that year. The fact that there is a sharp contrast is first established by a detailed analysis of the relevant figures of all parts of India. Then the reasons which account for that fact are established by documentary evidence. The growth of population had been checked by famine and pestilence repeatedly before 1921. Except for one tragic exception, population grew unchecked after 1921. APPENDIX IV (Famine and Pestilence), which contains relevant extracts from old reports, furnishes in detail the evidence which is summarised in the first section of this chapter. The next section is devoted to showing that 1921 is the 'Great Divide' in another respect—before 1921, cultivation had more than kept pace with the growth of population; after 1921, cultivation was lagging far behind while the population total was forging ahead. Developing the conception of 'land area per capita', we have the area of cultivated land per capita, and based on it, of productivity of cultivation per capita. This had been stationary or moving up before 1921; after 1921, it was falling steeply. The value of the material presented in this section consists in this: great care has been taken to sift available data about cultivation, locate the areas for which statistics of high quality are available on a comparable basis over a long period and then work out the results for these areas. The third section sets out the results of the comparative study contained in APPENDIX III and explains how the livelihood pattern has been changing in response to unchecked growth of population and the decline of cultivation per capita. The economic strength of the average household is seen to have weakened. The last section of this chapter brings out the final and most important aspect of the 'Great Divide'. Notwithstanding the famines of the last
century, India used to be surplus in food. Round about 1921, India developed a shortage of foodgrains and this shortage has been growing ever since—slowly but steadily. The relevant statistics have been brought together from different sources and they bring out unmistakably how the change came about over a series of years. The change-over is dealt with in different aspects. First, there are the statistics of imports and exports of grains already referred to. Then, there are the statistics of grain prices (for which, thanks to the completeness of information available with the Government of Madras, we can form a good picture for the last 150 years and institute an illuminating comparison with the trend of grain prices in the United States of America). Finally, there is the profound change in the whole conception of the responsibilities of the State in respect of the supply and distribution of grains, the breakdown of free trade, the Bengal Famine, and the development of ‘state trading system’ on which crores of our people depend today. The evidence in support of material conclusions in the analysis made in this section is presented fully in APPENDIX V (Shortage of Foodgrains).

The last chapter entitled “The Prospect—1981” poses the question—what will be the pattern of our growth during the next thirty years? We know whether the current on which we have been drifting since 1921 is taking us. We also know of the great attempts now being made to stop this dangerous drift and steer the ship of State to safety. How strong is the current? And how strong are these attempts? How is a favourable outcome to be assured? These questions are discussed at length and firm conclusions reached. Much of the evidence in support of material conclusions of the analysis in this chapter is set out in APPENDIX VI (Old Irrigation Projects and Irrigation Development Projects) and APPENDIX VII (Maternity Data and Birth Control). It is fully realised and made clear at every stage of the discussion that the nature of the material is such that widely varying views can be and are being held both in respect of the facts themselves and the appreciation of the significance of the facts. As the Royal Commission in the United Kingdom observed “parts of the subject may be likened to that fabled morass where armies whole have sunk.” The various views held on the subject are set out and reasons given for reaching a particular conclusion. The busy reader may, at this stage, turn over to the last section of the last chapter and read the conclusion straightaway.

10. Acknowledgements—Though the CONSTITUTION lays the duty of census-taking exclusively on the Central Government the census is carried out for the benefit of the entire State which, according to the CONSTITUTION “includes the Government and Parliament of India and the Government and the Legislature of each of the States and all local or other authorities
within the territory of India or under the control of the Government of India”. It gives me great pleasure to report that this was fully realised; and the census received unstinted support and ready assistance from the Governments of all states as well as all other authorities.

This census, like its predecessors, was made possible by the efforts of about six lakhs of public-spirited census workers who made the enquiries and the seven crores or so of citizens who gave them the information asked for. The fact that this is the first census of free India was appreciated by all and it contributed greatly to the success of the undertaking. The press throughout the country, as I have gratefully acknowledged once before, was consistently helpful and gave effective publicity and support to the census at all important stages.

The results of the labours of my colleagues will be before the public. Where all have given of their best, it would be invidious to name any one for special mention. I should, however, place on record my tribute of admiration for Shri J. D. Kerawalla whose enthusiasm for the work was infectious and whose untiring exertions may have contributed to the malady of which he died before his report could be published.

A number of officers helped me to direct the census and write this report. Shri D. Natarajan who was on Mr. Yeatt’s staff both in 1931 and 1941 has not only contributed his personal knowledge of prior censuses but also borne a heavy burden of administrative responsibility as Assistant Census Commissioner. Without his help I could not have held charge of two distinct offices. I have also benefitted by Shri Natarajan’s advice and suggestions in drafting my report. Shri P. N. Kaul had no previous experience of government offices when he was called upon to function as the statistical conscience-keeper not only for me but all the state census superintendents. He did this to the satisfaction of all of us. He organised the central tabulation office, trained and led a temporary staff which constructed all the all-India tables and checked all the state census tables. Shri T. V. Rangarajan and Shri Shankar Kapoor rendered notable assistance, in the collection and analysis of material for my use, as well as in checking the drafts and preparing them for the press. All the members of this able team, and the other members of the staff have worked long hours over a long period ungrudgingly and have still got much to do in seeing all this material through the press. This report is as much theirs as mine and I am very grateful to them.

I have drawn freely on the resources of other Ministries and Departments who have ungrudgingly offered all facilities. The Ministry of Labour spared the services of Shri S. P. Jain who prepared the Age Tables and Life Tables,
and whose initial study of the statistics of registration of births and deaths in combination with census data was the starting point of the systematic analysis of demographic data furnished in this report. The Planning Commission spared the services of Dr. V. Nath who helped me to formulate the scheme of natural regions and sub-regions and to build up parts of the statistical material presented in Appendices I and VI, including in particular, the data relating to 'decline of cultivation per capita'. I valued his advice and suggestions based on his study of conditions in foreign countries as well as his knowledge of discussion and study within the Planning Commission. The Adviser of the Planning Commission on Health Programmes, Dr. T. Lakshminarayana spared time for many discussions which clarified the issues relating to birth control. His experienced judgment gave me confidence in putting forward definitive conclusions in a highly controversial field.

Much material was specially compiled for me by the Surveyor General of India; the Director General of Observatories, Meteorological Department; the Director of Geological Survey of India; the Inspector-General of Forests; the Economic and Statistical Adviser, Ministry of Food and Agriculture; the Statistical Adviser, Indian Council of Agricultural Research; and the Head of the Division of Chemistry, Indian Agricultural Research Institute.

The Directorate General of Health Services spared the services of Shri Khushi Ram, who prepared most of the maps and all the diagrams in this report.

Publicity arrangements for the census were in the hands of Shri V. Krishnaswami of the Press Information Bureau, who took keen personal interest for which I am grateful.

In these days the pressure on the Government Press is extremely heavy and Shri C. A. Subrahmanyan, Controller of Printing & Stationery, India has a very difficult task to perform. But the Census of India is an old customer and there has never been any doubt about the anxiety of all concerned in the Government Press to do their best to ensure that census printing is attended to efficiently and speedily. I have every confidence that the work that still remains to be done will be done well.

R. A. Gopalaswami,
Registrar General, India; and
ex-officio Census Commissioner for India.

New Delhi: 1st August, 1953
# Table of Contents

## PART I-A — REPORT

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>i—xvi</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>xvii—xxxi</td>
</tr>
</tbody>
</table>

## Chapter I: The Land and the People—1951

### “We, the People of India”

1

### A — LAND AREA PER CAPITA

2—5

The area of land and the number of the people — Degree of accuracy of the data — Sample verification of the 1951 Census count and the margin of error — Territory covered — Land area per capita — Distribution of population and land area into zones and states — Unequal distribution of the people on land.

### B — TOPOGRAPHY, SOIL AND RAINFALL

6—12

Classification of land area into mountains, hills, plateaus and plains; and their distribution among the various zones — Topographically usable land; exclusion of sandy waste and marshy/watery areas — Topographically usable area in India and the six zones — Types of soils — Rainfall and its distribution — The five rainfall belts: the blue, dark green, light green, brown and yellow belts — Special hazards of areas in brown and yellow belts — The 5 natural regions, 15 sub-regions and 52 divisions.

### C — HIGH DENSITY SUB-REGIONS

12—20

The Lower Gangetic Plains, the Upper Gangetic Plains, Malabar-Konkan, South Madras and North Madras & Orissa Coastal sub-regions — Population, density and land area per capita — Conditions of topography, soil, rainfall and mineral resources in each of the five sub-regions — High density of settlement and smaller land area per capita — Comparison with India as a whole — Distribution of land among different rainfall
belts more favourable — Smallness of brown belt and absence of yellow belt — Net area sown and land use figures. — Fertile alluvial soil, higher productivity and smaller proportion of fallow land — Comparison of indices of land use with those of India as a whole.

**D — LOW DENSITY SUB-REGIONS**

The Desert, Western Himalayan, Eastern Himalayan, North-West Hills, North Central Hills & Plateau and North-East Plateau sub-regions — Population, density and land area per capita — Conditions of topography, soil, rainfall and mineral resources in each of the six sub-regions — Comparison with India as a whole — Low density of settlement and larger land area per capita — Lower proportion of topographically usable land — Better rainfall — Net area sown and land use figures — Low proportion of net area sown to topographically usable area and high ratio of unused land — Comparison of indices of land use with those of India as a whole — Probable existence of reserves of cultivable but uncultivated land — Existence of mineral resources of distinctly higher range and value in two of the sub-regions and the possibility of their influencing the relative distribution of people on the land in future.

**E — MEDIUM DENSITY SUB-REGIONS**

The Trans-Gangetic Plains, South Deccan, North Deccan and Gujrat-Kathiwar sub-regions — Population, density and land area per capita — Conditions of topography, soil, rainfall and mineral resources in each of the four sub-regions — Comparison with India as a whole — Better topographical components, poorer soil and unfavourable rainfall— Predominance of the brown belt and hazards due to capriciousness of rainfall and difficulties of cultivation — Net area sown and land use figures — Pressure of population on land.

**F — INDIA AND THE WORLD**

Chapter II: The Pattern of Living—1951

A—VILLAGES AND TOWNS  41-47

Number and population of villages and towns — The ‘village groups’ — Components of an average ‘village group’ — Differences in size of villages in different zones — More large villages in South India and West India — Differences due to different definitions of a village — Distribution of small, medium, large and very large villages among zones — Medium-sized village, the dominant type. Percentage of urban population in India — Highest proportion in West India — The order among other zones — Differences in urban ratio in states within each zone and divisions within each state — Cities, major towns, minor towns and townships — Distinction between towns and villages — Percentage of urban population in townships and minor towns in various zones — Cities and major towns — ‘Town groups’ — The ten largest cities of India (on ‘town groups’ basis).

B—HOUSES AND HOUSEHOLDS  47-54

Number of occupied houses in villages and towns — Number of persons per occupied house in villages and towns — Definition of ‘house’ and ‘household’ — Household data compiled for sample households from the National Register of Citizens — Number of households in 100 houses — Number of persons in 100 households — Number of persons in 100 houses — Sex ratio in households — Small, medium, large and very large households in villages and towns — Preponderance of medium households — Larger proportion of small households as compared to large and very large households — Pattern of household relationships — Excess of males over females in households, both in villages and towns — Size and pattern of rural and urban households in each zone — Heads of households and their wives — Sons and daughters of heads of households — Other persons related and unrelated to heads of households.

C—SEX RATIO  55-62

Number of females per thousand males for India and the zones — Low sex ratio in North India and North-West India — Sex ratio in certain natural divisions — The lower sex ratio in towns — Rural and Urban sex ratio in various zones. Accuracy of the figures — Considerations pointing to possible inaccuracies — Mr. Gait’s refutation — The consistency of the pattern at successive censuses — Doubts removed by the results of Sample Verification of the 1951 Census count. The sex ratio in the World — Excess of females in most countries.
in Europe — Excess of males (of European descent) in U.S.A., Canada, Australia, New Zealand and Africa. Sex ratio and migratory movements — Unequal sex ratio at birth and difference in the incidence of death on the two sexes — Registration data (1941-50) relating to sex ratio at birth and of infants who die within one year of birth for Madras, Madhya Pradesh, Bombay and Uttar Pradesh — Comparison of the registration data and the 1951 Census data relating to sex ratio of infants in these states — Difference in mortality of males and females at different ages as well as incidence of mortality due to famine and pestilence.

D — Age Structure

Recording of age at censuses — Definitions — Errors in returns due to ignorance about age — Digital preferences — Instructions to enumerators to make the best possible estimate of age — Use of calendars of important events — Completeness of age returns — 'Smoothed' Age Tables — Life Tables — 'Unsmoothed' figures for individual ages and for broad age-groups. Age pyramids for India and U.S.A. — Juvenile proportions for the six zones of India, Japan and certain European countries — Proportion of infants — Order of infant proportion in zones not necessarily indicative of the order of birth rate — Children of displaced persons — Proportion of infants, young children, and boys & girls — Comparison with other countries having low juvenile proportions and high juvenile proportions — Proportion of elderly persons and comparison with other countries — Age pyramids for villages and towns — Diminution in the juvenile proportion in towns — Age pyramids for Greater Bombay and Calcutta.

E — Marital Status Pattern

Proportion of unmarried persons, males and females — Child marriages — Proportion of unmarried males and females aged 15 and over — Comparison with other countries — Proportion of unmarried women in successive age-groups — Proportion of married males and widowers and married females and widows — Inequality of sexes — General equality of numbers of married males and married females in the country — Proportion of married males and married females to total population in the zones — Possible explanation of differences between zones — Comparison of proportion of widows and widowers in 1931 and 1951 — Significance of the drop in the proportion of widows.

F — Birth Rates and Death Rates

Relationship between births and deaths and the changing pattern of life — Official registration of births and deaths and publication of birth
rates and death rates — Comparison of census data and registration data in Uttar Pradesh — Incompleteness of registration data — Registration data of other states — Estimate of the actual number of births, deaths and net balance of migration from the observed growth of population — Detailed discussions on birth rates and death rates, in APPENDIX II — Estimated birth rates and death rates for India and zones — Comparison of estimated rates with those of U. K. and U. S. A.

Nature of maternity data — Local census question used in some states to collect maternity data — Experimental Census of Births and Deaths — Review of maternity data collected in Travancore-Cochin — Child birth index, child survival index and child loss index of completed maternity experience and incomplete maternity experience — Relation between tempo of child-bearing and the age of mother — Mid-maternal age — Child birth indices by livelihood groups of mothers, rural and urban — Maternity types differentiated by age of commencement of child-bearing — Diminution of child birth index attributable to postponement of commencement of child-bearing — Child birth indices of widowed mothers — Comparison between Travancore-Cochin and Madhya Pradesh in respect of completed maternity experience of still married mothers aged 45 and over — Comparative study of other maternity data of Travancore-Cochin and Madhya Pradesh — Maternity data relating to villages in West Bengal — Comparison of the maternity data of India and U. K. — Proportion of first order births, second order births, third order births and births of fourth and higher order and the estimated number of births of each order — The concept of improvident maternity — Incidence of improvident maternity.

Chapter III: Livelihood Pattern—1951

and proportion of agriculturists and non-agriculturists — Self-supporting persons among agriculturists in each of the four agricultural livelihood classes — Numerical insignificance of agricultural rentiers (Livelihood Class IV) — Types of people included in Livelihood Class IV — Cultivators and cultivating labourers — Distinction between owner-cultivators and tenant-cultivators — Preponderance of owner-cultivators. Distribution of non-agriculturists into (1) employers, self-employed persons and employees; and (2) non-agricultural rentiers, pensioners and miscellaneous income receivers — Proportion of all self-supporting non-agriculturists to all self-supporting persons — Low ratio of employers — Large number of self-employed persons — Proportion of earners of 'net profits' higher than that of earners of 'wages and salaries'. The 10 divisions of industries and services and 88 sub-divisions — Number engaged in each of the ten divisions — Activities included in the ten divisions and their relative importance — Affiliation of dependants to self-supporting persons by means of livelihood — Number supported by each of the eight livelihood classes — Relation between the non-agricultural Livelihood Classes V to VIII and the ten divisions of industries and services — Number of dependants supported by self-supporting persons.

B—Zonal Variations 110—118

Proportion of self-supporting persons, earning dependants and non-earning dependants to general population in each zone — Differences between zones not due to differences in age structure — Smaller proportion of village women doing field work in East India and South India — Contrast in Central India and West India — Availability of gainful employment in different zones — Bread-winners — Male bread-winner proportions in villages and towns — Dependence on agriculture in different zones — Numerical insignificance of agricultural rentiers and their dependants — Proportion of cultivating labourers and their dependants — Proportion of tenant-cultivators and their dependants — Proportion of owner-cultivators and their dependants — Relative proportion of cultivators to cultivating labourers — Natural divisions with high and low ratio of cultivators to cultivating labourers — Natural divisions with high and low proportion of owner-cultivators to tenant-cultivators — Agricultural landholders and landless agriculturists — Figures how compiled — Proportion of landless agriculturists to agricultural landholders.

C—Comparison with U. S. A. and Great Britain 118—120

Difficulties in comparison of economic data of different countries — Comparison of burden of dependency between India, U. S. A. and Great Britain — Larger burden of dependency in India — Gainfully employed persons in India, U. S. A., and Great Britain by sectors of productive
activity — The low figures of man-power devoted to food production in U. S. A., and Great Britain — Differences in numbers engaged in mining, manufacture and commerce — The significance of differences.

Chapter IV: Before and Since 1921

A — Growth of Population: Checked and Unchecked

The changing picture — Changes during the three decades before and since 1921 — The profound difference in the pattern of growth before and since 1921 — Growth in the present territory of India since 1891 — Increase in numbers upto and since 1921 — Are the figures true ? — The reasons for doubt — Genuineness of striking contrast between the two thirty-year periods — Analysis of the changes during the three decades before 1921 — Part played by famine and pestilence — 1921, the turning point — Natural checks to growth of population before 1921 — Famines (including famine diseases), epidemic diseases and endemic diseases — Growing effectiveness of counter-checks since 1921 — The Bengal Famine of 1943 — Extracts from reports on famines and pestilence, in Appendix IV — New phase in the effort to combat famine. Comparison of the rates of population growth in India with those of other countries — Population of the World 200 years ago — Increase by 1800 — Growth of the New World — Population about 1850 — Acceleration in growth — Population about 1900 — Change in distribution of the world's population between 1750 and 1900. Fall in the population of western European countries — Better nutritional standards — Fall in death rates — Practice of contraception during last fifty years. World population figures in 1950 — The theory that fall in birth rate was a biological phenomenon — U. K. Royal Commission's findings about cause of fall in birth rates. The trebling of mankind in the last two centuries — Present rate of growth not a normal characteristic of an indefinite past — Will this growth continue indefinitely in future ?

B — Decline of Cultivation per Capita

Growth of population during the last 60 years in relation to the growth of cultivation — Extent to which the growth of cultivation lags behind — Difficulties in quantitative assessment — Reliability of cultivation statistics — Data on population and land use, in Appendix I — Statistics of cultivated acreages in India more reliable than statistics of yields of crops — Area of cultivated land per capita — Study of selected districts having reliable data over 60 years — Small but unmistakable decline in the area
of cultivated land per capita. Intensification of cultivation versus extension — Relation between a drop in the area cultivated per capita and a drop in the productivity of cultivation — Methods of increasing yield: more double-cropping, more irrigation, better fertilization and better culture — Lack of quantitative data regarding the latter two — Increase in double-crop area per capita nowhere near the rate of growth of population; same with irrigated area per capita — Conclusions based on study of selected districts supported by figures for other areas.

C—CHANGE IN THE LIVELIHOOD PATTERN . . . . . . . . . . . . . 150—156

Effect of rapid and uninterrupted growth of population since 1921 and decline in cultivation per capita on the livelihood pattern — New developments during the last 30 years: Development of manufacturing industries and transport — New towns — Other developments — the quickening tempo of these changes during the last decade. Has the development of industries and services been sufficient to offset the decline in cultivation per capita? — Lack of data relating to industries and services — Rate of growth in villages since 1921 slower than in towns — Larger growth in cities and major towns — Growth of rural population outstrips growth of cultivation — Definite decline in the area of cultivated land per capita — Absence of corresponding decline in the relative weight of dependence on agriculture — Increase of non-earning dependants rough index of growth of unemployment — Increase in cultivators and cultivating labourers on the same area of cultivated land index of increased underemployment — Changes in the proportion of cultivating labourers to all workers on land and probable explanation.

D—GROWTH OF FOOD SHORTAGE . . . . . . . . . . . . . . . . . 157—175

Food controls — Development of a system of state trading in foodgrains — Gigantic scale of operation of the system — Significance of the emergence of the system in relation to the growth of population and cultivation before and since 1921 — Evolution of ‘free trade’ — Maintenance of free trade in foodgrains during famines — Recommendations of the Famine Commission of 1880 — Adherence to the policy of non-interference with trade during the economic depression of 1930’s — Breakdown of free trade and the Bengal Famine — Continuance of state trading and food controls after the War — Nostalgia for return of free trade — De-control in 1947 and Re-control — Planning Commission’s warning against lifting of controls — A big question mark over the future. Historical review of trend of foodgrain supply in India, Pakistan and Burma — The grains surplus in 1880 — Net exports from undivided India for the five-year periods 1890-91 to 1894-95 and 1905-06 to 1909-10 — Net exports out of Burma during the same period — Rising
tempo of exports of foodgrains from Burma - Combined India-Pakistan-Burma trading unit had large exportable surplus - Undivided India still a net exporter in 1920 - End of self-sufficiency and change-over from net exports to net imports round about 1921. Changes during and since World War II - Average level of foodgrain imports for 1947-52 - Steady increase of net imports not explainable by shift in cultivation away from foodgrains. Historical review of trend of foodgrain prices - Trend of prices of South Indian paddy over 150 years - Comparison with the course of wheat prices in U. S. A. - Impracticability of direct determination of quantum of shortage of foodgrains as the difference between production and consumption - Detailed study of available data, in Appendix V. Correlation of increase of foodgrain imports with decline of cultivation per capita - Surprising that the imports were not larger than they actually were - Possible explanations.

Chapter V: The Prospect—1981

A—Future Growth of Population

Examination of population trend in Great Britain by the Royal Commission - Insufficiency of existing data - Considerations involved in the attempt to peer into the future - Forecast of population of Great Britain for 1962, 1977, 2007 and 2047, on three different assumptions based on future 'family size' - Nature of the assumptions. Forecast of future population in India - Data much more meagre - Lower and upper limit estimates for 1961, 1971 and 1981 based on growth during last three decades - Alternative line of approach based on age-sex proportions in last three censuses - Forecast for the three states, Uttar Pradesh, Madras and Madhya Pradesh and deduced forecast for India. Review of birth/death data since 1921, with a view to ascertain trends relevant to forecast - Registration data for last three decades - Mean decennial birth rates and death rates - Estimates of under registration in 1941-50 based on computed rates - Fall in actual births and deaths registered during 1931-40 and 1941-50 - Comparison of registration rates with census growth rate - Likely deterioration in registration - Comparison of registration data of 1921-30 and 1931-40 - Possibility of genuine fall in actual death rate - Comparison of registered rates during 1931-40 and 1941-50 - Greater fall in registered birth rate - Differences in trend of death rates and birth rates in Punjab, Madras, Bombay and Madhya Pradesh - Definite fall in death rate and the microscopic fall in birth rate - Evidence of Life Tables - Significant increase in expectation of life — Expectation of life in India compared to England and Wales, Australia, New Zealand, U.S.A., Japan and Egypt —
Continuing high level of infant and child mortality — Net diminution of birth rate during 1941-50 compared with 1921-30 — Two likely causes: (1) Relative proportion of married females in age groups 15-24, 25-34, 35-44 — Figures for Uttar Pradesh, Madras, Bombay and Madhya Pradesh — Analysis of Madhya Pradesh figures — Change due to distortions caused by selective mortality; and (2) Rise in age of marriage — Inferences about future maternity and mortality. — Conditions affecting the validity of forecasts for uninterrupted growth of population up to 1981. Significance for the future of the decline of cultivation per capita and growth of food shortage since 1921 — Three possibilities for 1981: catastrophe, the 'near miracle' and the third alternative of keeping pace with the uninterrupted growth of population.

B — Agricultural Productivity: Development Targets

Differences between 'productivity' and 'production' in the context of agricultural development — Single yardstick for measurement of productivity — Present level of productivity in India — Estimated shortage of foodgrains — Targets of development for 1961, 1971 and 1981 — Targets are minimal estimates of the scale and tempo of development required — Role of Governments — The First Five Year Plan — Schemes for development of irrigation — Unprecedented scale of the undertaking — Present high proportion of irrigated land in the country — Comparison with other countries — Proportion of irrigated area in various zones — Development of irrigation during last century by public and private enterprises — Additions to irrigation due to Public Works Projects constructed during 1891-1920 and 1921-40 — Diminishing tempo of construction and inequalities of development in different zones — History of irrigation development in U. S. A. — Comparison with India — Irrigated area under old projects and Plan projects in different zones — Reason for confidence that planned extension of major irrigation will be achieved — Analysis of costs and results, in Appendix VI — Main conclusions — Probable increase in productivity from Plan projects on completion — Planned target likely to be achieved before 1961 — Contribution of major irrigation projects will be about one-fourth of the overall development required by 1961. Minor irrigation schemes — Anticipated increase in irrigation area by zones — Difficulties in assessing results of minor irrigation programmes — Need for careful adjustment of subsidies to cultivators — Anticipated productivity — Uncertainty of time and cost involved — Combined increase in productivity compared with need in 1961 — Other means of increasing yield: Improvement in fertilisation and cultural practices, reclamation of waste land and use of tractors. Present level of gross area sown — Anticipated limit for 1981 — Resultant increase in productivity — Present level of irrigated area — Anticipated increase by 1981 — Resultant increase in productivity — Other means of increasing
productivity — Resultant increase. Total increase in output just sufficient for 45 crores, the likely population about 1969 — Effort to 'keep pace' with uninterrupted growth upto 1981 unlikely to succeed.

C—IMPROVIDENT MATERNITY: REDUCTION TARGET 207—226

Implications of continuing food shortage and unchecked growth of population — Steadily increasing need for importation of foodgrains — The measure of increase in import norm with reference to population growth — Bare minimum of development of production necessary to stabilise the import norm — Comparison with other countries depending on imported food supplies — Future possibilities of food supplies from foreign countries — Two main conclusions: (1) We cannot grow enough food at present rate of increase; and (2) if we cannot grow more we must eat less. Need to realise that it is improvident to increase in numbers indefinitely — Is substantial reduction in rate of growth possible? — Varying views in different countries on the population problem — Crystallisation of public opinion in recent years — The Planning Commission's views — Acceptance of need for governmental action — Need for considering targets and priorities — Need for achieving a substantially stationary population before our number exceeds 45 crores — Improvident maternity — Incidence of improvident maternity — Elimination or drastic reduction necessary for stabilising population — Present level of incidence of improvident maternity — The reduction target for 15 years — Avoidance of improvident maternity the national need — Method of approach — The organisation necessary — Development of maternity and child welfare centres as agencies for rendering help to mothers before, during and after child-birth — The personnel necessary — The role of 'dais' — The need for co-operation from public-spirited social workers — Central Research and Information Unit; tasks to be completed within specified time — Nationwide campaign of publicity for elimination of improvident maternity necessary — Review of progress every year — Estimate of per head cost for scheme, in APPENDIX VII. Attainment of the target for reduction of improvident maternity feasible — Together with the indicated targets of development of agricultural productivity it will provide permanent solution of the population problem.

D — CONCLUSION 226—228

NATURAL REGIONS, SUB-REGIONS AND DIVISIONS 231

POPULATION ZONES, STATES, NATURAL DIVISIONS AND DISTRICTS 232—234
MAPS AND DIAGRAMS

1. Distribution of Population by districts — 1951 Census (MAP IN COLOUR) .... Frontispiece

2. Natural Regions and Sub-Regions (MAP). ...... Preceding 1

3. Rainfall Belts in India (MAP — IN COLOUR) ...... 1

4. Geology and Mineral Resources (MAP — IN COLOUR) ...... 1

5. Population and Land Use — 1951 (MAP — IN COLOUR) ...... 1

6. Age Pyramids — India and U. S. A. ...... 63

7. Age Pyramids — India, Rural and Urban ...... 63

8. Age Pyramids — Greater Bombay and Calcutta ...... 63

9. Distribution by Civil Condition (Marital Status) of 10,000 persons in India and Zones (IN COLOUR) ...... Facing 70


11. Logistic Graduation of Maternity data — Maternity Type A (IN COLOUR) ...... 85

12. Logistic Graduation of Maternity data — Maternity Type B (IN COLOUR) ...... 85

13. Number of First births, Second births, Third births, Fourth and higher order births ...... Facing 88

14. Distribution of 10,000 persons by Sex and Household Economic Status ...... Preceding 89

15. Distribution of 10,000 persons of Agricultural Classes by Sex and Household Economic Status ...... 89

16. Distribution of 10,000 persons of Non-agricultural Classes by Sex and Household Economic Status ...... 89

17. Distribution of 10,000 persons by Livelihood Classes — India and Zones — General Population ...... 89

18. Distribution of 10,000 persons by Livelihood Classes — India and Zones — Rural Population ...... 89

19. Distribution of 10,000 persons by Livelihood Classes — India and Zones — Urban Population ...... 89

20. Distribution of 10,000 Self-supporting Persons in non-agricultural population by Employers, Employees Independent Workers (Self-employed Persons) and persons not economically active ...... 89
21. Distribution of 10,000 Self-supporting Persons of Non-agricultural Classes in Industries and Services by 10 divisions of Industries and Services — India, North India, Central India and North-West India

22. Distribution of 10,000 Self-supporting Persons of Non-agricultural Classes in Industries and Services by 10 divisions of Industries and Services — India, East India, South India and West India

23. Active Workers and Dependents — India, Great Britain and U. S. A.

24. Mean Annual Rate of Growth of Population (1891—1900) (MAP)

25. Mean Annual Rate of Growth of Population (1901—1910) (MAP)

26. Mean Annual Rate of Growth of Population (1911—1920) (MAP)

27. Mean Annual Rate of Growth of Population (1891—1920) (MAP)

28. Mean Annual Rate of Growth of Population (1921—1930) (MAP)

29. Mean Annual Rate of Growth of Population (1931—1940) (MAP)

30. Mean Annual Rate of Growth of Population (1941—1950) (MAP)

31. Mean Annual Rate of Growth of Population (1921—1950) (MAP)

32. Mean Decennial Growth Rates for six decades 1891—1901 1941—1951 (by Sub-Regions) — (MAP)

33. Additions to Population during 30 years before and since 1921

34. Droughts and Floods before and since 1921

35. Trends in cultivation per capita in 13 selected divisions 1891—1951. (MAP — IN COLOUR)

36. Exports and Imports of Foodgrains in India (1890—91 to 1952)

37. South Indian Paddy Prices — Trend over 150 years (IN COLOUR)

38. Development of Irrigation:
  Major Irrigation Projects — Trend of Financial Returns
APPENDIX I — POPULATION AND LAND USE

Introductory Note

Table Series:
1 — Population and land use in India
2 — Yield rates of principal crops in India
3 — Population and land use — India and the World
4 — Population and land use — Great Britain
5 — Population and land use — United States of America
6 — Population and land use — Union of Socialist Soviet Republics

APPENDIX II — NOTE ON BIRTH RATES AND DEATH RATES

Note on birth rates and death rates

Annexure I — Mean decennial growth rate
Annexure II — Computed Birth and Death Rates in India during 1941–50 (by Shri S. P. Jain)
Annexure III — Logistic Graduation of Maternity data: and derivation of table of Age Specific Maternity Rates

APPENDIX III — REVIEW OF CENSUS ECONOMIC DATA

Part A — Census questions, definitions and classifications
Part B — Review of data relating to household economic status
Part C — Review of data relating to agriculturists
Part D — Note on data relating to cotton textiles

APPENDIX IV — FAMINE AND PESTILENCE

Part A — List of famines and scarcities
Part B — Old famines
Part C — Plague, cholera and small-pox
Part D — Malaria, kala-azar and fevers
Part E — The Great Influenza Pandemic
Part F — The Bengal Famine, 1943

APPENDIX V — SHORTAGE OF FOODGRAINS

Part A — Note on production, consumption and shortage of foodgrains in India — 1951
Part B — Supply and prices of foodgrains
Part C — Estimates of rates of consumption of foodgrains
Part D — Import and export of foodgrains in relation to India’s foreign trade
Part E — Distribution of foodgrains — Government responsibility