

M. Vijayanunni*

The Millennium Census of India 2001: Innovations, Initiatives and Improvements

THE next census of India is due to be taken as on 1st March 2001 and this will be the fourteenth in the uninterrupted series of decennial censuses of India since 1872 having just completed its quasiquicentenary (125 year) in 1997. While each census is a major land mark on its own, the next census coming at the crossroads of two millennia will throw up historic benchmark data on the state of the nation's society, economy and demography at a point of time which marks the commencement of not only the next century but also the next millennium and hence can be truly described as the Millennium Census providing a unique and vital database to measure and calibrate how far India and its people have come during the last century and millennium and what will be the progress during the coming decades, century and millennium. The census will hold a mirror to the contemporary society with all its strengths and weaknesses and take a faithful snapshot of it.

A number of innovations and improvements are being planned for the 2001 census. Instead of using both the individual slip and household schedule as in the 1991 census which resulted in copying errors and other discrepancies and inconsistencies in the raw data between the two different schedules, it is proposed to replace the individual slip with the household schedule to be canvassed as the only data source at the enumeration stage. It is a fact that there are many experienced persons within and outside the census organization who strongly advocate the continued use of the individual slip in preference to the household schedule which because of its big size they would say is more difficult and inconvenient to handle at the canvassing stage in the field and at the data entry stage in the office. The individual slip, they would say, is small, compact and easy to canvass and handle. In fact the individual slip was ideally suited for the manual sorting used in 1951, 1961 and 1971, but not so much for sample

*Registrar General and Census Commissioner of India, 2AMansingh Road, New Delhi 11001.,India, Fax: (91-11) 3383145, E mail: rgindia@hub.nic.in. Views and suggestions on the 2001 census of India are welcome.

selection and computer tabulation which is the present practice since 1981. It is also not suited for generating household data. More importantly, with the burgeoning population of the country which would rise almost three-fold from 36 crore in 1951 to over 101 crore in 2001 the volume of individual slips involved at the rate of one per individual has been becoming more and more difficult to handle, store and transport. All things considered it is perhaps time to switch over back from the individual slip to the household schedule which was in vogue at the pre-1941 censuses. The census of India is both a full-fledged population and housing census in its full sense. The schedules canvassed at the 2001 census will be the houselist and the household schedule.

The Houselist and the Housing Census

The houselist is prepared a few months prior to the census enumeration, during the house numbering and houselisting operations, and provides the frame for the actual enumeration. The houselist will be used to collect data on housing and household amenities on a much larger scale than in the earlier censuses. The United Nations Principles and Recommendations (UNP&R) for the housing census have also been carefully considered for adoption.

Referring to the selection of topics to be included in a housing census, the United Nations highlights the importance of limiting statistical inquiries to the collection of data that can be processed and published within a reasonable period of time. It recognizes that it is customary to conduct a housing and a population census as consecutive operations as in India and that the amount of data attempted to be collected should not be beyond the capacity of enumerators and data-processing facilities so as not to jeopardize the success of the census itself by attempting too much.

The UNP&R advises that the topics to be covered in the housing census relating to living quarters, households and buildings should be determined upon a balanced consideration of (a) the needs of the country (national as well as local) to be served by the census data; (b) the achievement of maximum degree of international comparability, both within regions and on a worldwide basis; (c) the probable willingness and ability of the public to give adequate information on the topics; (d) the technical competence of the enumerators in regard to obtaining information on the topics by direct observation; and (e) the total national resources available for conducting the census. Due regard should also be paid to the usefulness of historical continuity in providing opportunity for a comparison of changes over time. Housing censuses should be designed primarily to meet national needs and should any discrepancy exist among national needs, regional recommendations and global recommendations, national needs should take precedence followed by regional recommendations and finally by global recommendations.

The census of India has been collecting data on the construction material of wall, roof and floor of buildings, purpose for which used, tenure status, number of living rooms, availability of drinking water, electricity and toilet facility and fuel used for cooking. In the 1991 census the economic census questionnaire was also canvassed and the data collected were handed over to the Department of Statistics for tabulation. Since the economic census is being conducted by the Department of Statistics separately in 1998, the 2001 census will not be

required to collect data on enterprises by canvassing the enterprise list as was done at the time of 1990 houselisting operations.

Year of construction or age of building is an item of information usually asked for. However, this information in isolation is not a very accurate or reliable index of the condition of the housing stock because that depends on the materials and methods of construction and the number of years that the buildings would last. Further, in many cases the occupants may not know the date of construction. All things considered, it is felt that it would be useful to ask a simple and direct question on whether the building is so dilapidated or old as to be dismantled. This would bring out data on the most decrepit buildings and structures which are in danger or not safe for human habitation and need immediate replacement to improve the condition of the housing stock.

Like the Stone Age, Bronze Age and the Iron Age of yore, this is the Plastic Age and plastic is being extensively used for shelter in slums and shanties. Therefore, plastic has been introduced as one of the items in the list of materials of wall and roof. This will yield useful data on the prevalence of plastic as a sheltering material among the poorer sections.

The availability of bathing facilities and cooking facilities within house or living quarters are two additional items of information proposed to be collected. This is in line with the UNP&R and would provide new and useful data.

Though floor space in living quarters is a suggested item, the UNP&R itself recognizes that collecting it is difficult; occupants may not know the exact or even approximate area of their house; training enumerators to calculate the floor space would be complicated and costly, and would result in inaccuracies. In the Indian situation this is not a practical proposition.

Availability of drainage, open or covered, is also proposed to be ascertained in the context of the fact that in the absence of proper drainage facilities the waste water from households stagnate around the habitations serving as breeding grounds for mosquitoes and other insects causing unhygienic conditions and water borne and vector carried epidemic diseases like gas to enteritis, cholera, dengue, malaria etc. This information is in addition to the data on toilet facility already being collected through the house list.

The availability of mass communication tools like telephone, radio and television, is also proposed to be ascertained. This will provide valuable data to assess the outreach of these media throughout the length and breadth of the country.

The ownership of modes of transport like bicycle for the common man and motorized vehicles like scooter, motor cycle, moped, car, jeep and van with the middle and upper middle classes are also proposed to be ascertained. This will provide another valuable data input for government as well as other interested agencies. It is not proposed to include computer ownership by households as an item in this enquiry because it is as yet a minuscule segment in India unlike say the United States where more than half the households have a personal computer already and the number is steadily growing, or the United Kingdom where 29 per cent own home computers.

For the same reason durable consumer appliances or white goods like refrigerators, washing machines, air conditioners etc. available to the household are not proposed to be ascertained. It will be interesting to note that with the liberalization of the economy and

booming growth rates in recent years, China is planning to collect data on the ownership of such consumer appliances by households in the next census. How successful it will be has to be seen.

It is also proposed to revive the question on cultivation of land and its tenure status which used to be collected till 1981 and was not collected in 1991. This if cross classified with woman-headed households will provide gender-based data also. The information on acreage is both difficult to collect accurately and compile in any meaningful manner and hence is not being attempted.

Another new item of information is the poverty status by netting the households below a certain income level based on the Planning Commission's most recent estimates and the average household size in the country which is 5.5. This is expected to provide a rough and ready estimate of the number of households below the poverty line in the entire country.

Thus the house list to be canvassed in the year 2000 is expected to throw up a wealth of data which will be tabulated on computer and published very quickly even before the results of the census enumeration are out.

The Household Schedule and the Population Census

The household schedule will be the only form canvassed at the census enumeration containing all the questions relating to both the household particulars and the individual particulars. Maximum use of pre-coding by the enumerator will be made. The religion, language and scheduled caste or tribe data will be collected for the household as also whether it is male-headed or female-headed. These will be indicated by codes and therefore subsequent tabulation can be done very quickly.

The individual particulars collected will include as in the previous censuses, name, relationship to the head of the household, sex, age, marital status, mother tongue and two other languages known, literacy, highest educational level passed along with subject, whether attending any educational institution or course including correspondence course, work done last year, details of non-workers and work-seekers, migration by birth place and place of residence and reason for migration, duration of residence at present place of living, and in the case of women the age at marriage, number of children born and surviving and whether any child was born alive during the last one year.

Many Indians are now spending long hours for traveling to and from work. It is proposed to collect data on commuting to work, for the first time. The distance from residence to the place of work, mode of travel and the time taken for the travel will be ascertained. This will provide useful information for governments and other agencies to assess the requirements of public and other transport. The mode of travel will be ascertained as to whether it is by walk, bicycle, scooter, motorcycle, moped, other own conveyance like car, or by train, bus or other public conveyance.

With the rapid rise in aged population it is necessary to collect specific data on retired persons or more pointedly, on pensioners i.e. those who live on pensions, both service pensions and other welfare pensions. Therefore, instead of the earlier omnibus category of retired

persons, retirees etc., a well-defined category of pensioners will be introduced this time without mixing it up with dissimilar groups like persons who live on income from rents, interest on deposits, dividends etc. who may be from any age group and not necessarily the elderly.

There is a lot of awareness and discussion now about the problems of the aged population, with 1999 being declared as the international year of the older persons and October 1 every year being observed as the international day for the aged. As a tribute to the aged the census of India will extend the upper limit for presentation of data by age-to-age 80-90 or even to age 100. This will help generate disaggregated age-group wise data on the vastly different problems and situations of the young old (60 to 69 years), old (70 to 79 years) and oldest old (80+ years). This will help government as well non-government agencies in their endeavours to address the increasing problems of the aged.

The question on the physically handicapped which was dropped in the pre-independence censuses due to the unreliability of the data collected was again asked in 1981 as a special case in view of the year 1981 being observed as the International Year of the Disabled. But the inadvisability of attempting to collect this data in India through the census was again proved. The numbers of disabled returned for all-India were as follows: totally blind - 4.79 lakh; totally dumb - 2.77 lakh; and totally crippled - 3.64 lakh; total -11.19 lakh. Contrast this with the estimates of actual numbers of disabled in the country. Some estimate the total number at ten per cent of the population, which works out to about ten crore; a more conservative estimate is four per cent which works out to four crore. These figures will again re-establish the census organization's considered view that the census is not the right medium through which data collection on the disabled should be attempted. This is a sensitive subject particularly for traditional families who would not like to openly refer to and it becomes embarrassing to both the enumerator and the respondent, and hence the severe undercount. While the details on the disabled are collected in the USA through the census questionnaire, the vital difference is that there the method adopted is self-enumeration by an educated public with the questionnaire being filled at home confidentially and therefore the information would be furnished more completely. The collection of data on the disabled should not be undertaken through the medium of census enumeration.

The question to enumerate ex-servicemen pensioners included in 1991 much against the advice of the census organization, is another instance in point on how such minuscule data should not be attempted to be collected through a gigantic operation like census. The number of ex-servicemen returned in the census was only a portion of the various estimates of ex-servicemen already available e.g. about 9 lakhs on the basis of identity cards issued; around 58 lakhs as per the Rajya Sainik Boards; and around 11 lakh ex-servicemen pensioners as per the figures of the Controller General of Defence Accounts. The ex-servicemen population is so small and unevenly distributed that attempting to collect such data through census enumeration is like looking for a needle in a haystack. It is desirable that this and similar questions are not canvassed at the 2001 census.

A list of items on which data are intended to be collected in the 2001 census through the Houselist and House hold schedule is given in the Appendix.

While the publication of the 1991 census data through computer floppies for the first time has substantially speeded up the dissemination process and ensured the release of data the moment it is finalised in the census office, the delay in the printed volumes coming out is solely attributable to the inability of the Government Presses to cope with the work. In fact the time and effort required for printing out census volumes have been considerably shortened now with the census organization supplying camera-ready copies (CRCs) for final printing thereby eliminating the processes of composing, proofreading and corrected proofs. Hardly a month is required to print, bind and supply the final copies of such CRCs. Manuscripts of census volumes entrusted to the Government Presses in 1993 were still pending execution in 1998 and a total of about 100 volumes entrusted during the period from 1993 to 1997 were pending in the different Government Presses. The census has now succeeded in making a breakthrough in this unsatisfactory situation by getting clearances from the Government for arranging alternate printing through private presses and as a result over 50 census volumes could be printed out during the last six months alone.

Setting up of a website on the internet in 1998 has been another advance in the dissemination of census data. The website at <http://www.censusindia.net> provides information on what census data are available and where and how to get them. The Internet Scout Project of the University of Wisconsin, Madison, USA has chosen the censusindia site as a selection in the premier bi-weekly collection of useful internet sites for discerning internauts in the social sciences based on criteria like depth of content, author, information maintenance and presentation. We will be working towards the objective of on-line dissemination in due course.

Expedition of data release is another field in which the next census will bring in innovations. The 1991 census had to reckon with many bottlenecks in data processing and tabulation. What compounded the picture was that there was no planning for advance tabulation based on a sample. In 1971 advance tabulation had been done based on a one per cent sample and the tables based thereon were released by 1972 which happened to be the census of India's centenary year. In 1981 advance tables based on a five per cent sample were released for India and states by 1983. Due to one reason or other such a decision for advance tabulation based on a sample was not taken in 1991 perhaps in the expectation that the final tables will be ready by 1993 or 1994 on completion of the tabulation which was planned in two stages viz. stage I and stage II. Many things happened to belie this expectation. Delayed Governmental sanctions for the procurement of the data entry equipment and for the creation of posts of data entry operators resulted in delays in installation of the equipment and in the staff coming into position in time. Efforts to offset the time so lost by entrusting part of the data entry work to private companies did not succeed due to poor quality and some of the in-house data entry was also not of adequate quality resulting in such work having to be re-keyed and involving more time. A herculean effort was required to steer the 1991 data processing out of this maze of complications and bottlenecks.

The District Census Handbooks containing village and town-wise data for each district brought out since 1951 at every census have been much in demand by data users but the

long time lags in their printing out in 1981 and 1991 have detracted from their value. Even after the data being made ready by the census organization, long delays are occasioned due to the low priority given to their printing by the state government printing presses. It is proposed to revamp the procedure of compiling and publishing the District Census Handbooks so as to obviate these delays. The amenities data will be collected well in advance of the completion of the census enumeration and with the Primary Census Abstracts being available quickly thereafter, the District Census Handbooks will be taken in hand by the census organization and brought out immediately after that.

Prognosis for the 2001 Census

Better planning in advance can and will ensure timely releases of data at the next census. Sustained and systematic action and continuity of experienced and knowledgeable top echelons are of course a must for the success of this operation as was the case in 1961. The efforts for improving the quality of the census have started with the framing of the questions and the design of the schedule format. The phraseology of the questions will be made more simple and direct. This will facilitate the enumerator in eliciting the required information and improve the quality of the responses from the respondent. The instruction manual will be substantially simplified and streamlined, removing unnecessary verbiage and reducing the bulk. The concepts and definitions will be rationalised and expressed in simple language bereft of jargon making it easily comprehensible to the enumerators, supervisors and other census personnel. The message of the census will be carried to every nook and corner of the country through extensive publicity measures so that every citizen of the country is aware and prepared to furnish the data when the enumerator approaches. All measures will be taken to improve the quality of the census taking and the data set. The design of the schedules and the abstraction and compilation procedures for 2001 are being formulated with the objective of speedy release of data. The substantially reduced time periods proposed for the release of data at the 2001 census through careful advance planning and expeditious processing procedures are indicated below:

	2001
Houselist tables	One Year
Provisional totals	One week
Primary Census Abstracts	Three months
District Census Handbooks	One year
Advance tables Detailed	Eight months
tables	Two to three years

These are not just wishes or dreams but definite, achievable targets based on a realistic and workable plan of action.

The term millennium has two meanings, the thousandth anniversary and a period of general well-being and prosperity. Let us look forward to a period when all is well with the census so that the millennium census can live up to the appellation in both senses of the term.

Appendix**Data Items Proposed to be Collected at the Census of India 2001****1. Houselist**

(To be canvassed at the houselisting operations in the year 2000)

1.	Number of buildings	16.	Availability of toilet
2.	Construction material of the wall roof and floor	*17.	type of toilet
*3.	Condition of the building	*18.	Drainage
4.	Use of the building	*19.	Bathing facility
5.	Number of households	*20.	Cooking facility
6.	Houselist population	21.	Cooking fuel used
*7.	Male-headed and female-headed households	*22.	Radio/transistor
8.	Ownership of houses	*23.	Television
9.	Number of rooms	*24.	Telephone
*10.	Number of married couples	*25.	Bicycle
*11.	Number of bedrooms	*26.	Scooter/Motor cycle/Moped
12.	Drinking water source	*27.	Car/Jeep/Van
13.	Proximity of the water source	*28.	Bank Account
*14.	Source of Lighting	*29.	Cultivating land ownership
15.	Availability of electricity	*30.	Extent of irrigated land
		*31.	Poverty status

2. Household Schedule

(To be canvassed at the enumeration operations in the year 2001)

A Household particulars:

1. Type of household
2. Male-headed and female-headed households
3. Religion
4. Scheduled caste and scheduled tribe
5. Language
- *6. Aged persons as care-givers
- *7. Aged persons who require financial
or physical support

B Individual particulars:

- | | | | |
|-----|--|------|---------------------------|
| 1. | Name | 15. | Work status |
| 2. | Sex | 16. | Non-workers status |
| 3. | Relationship to the head | 17. | Industrial classification |
| 4. | Age | 18. | Occupation |
| 5. | Marital marriage | 19. | Category of the worker |
| 6. | Age at marriage | *20. | Commuting to work |
| 7. | Children surviving | | (a) Distance |
| 8. | Children ever born alive | | (b) Mode of transport |
| 9. | Children born alive during the last
one year | | (c) Time taken |
| 10. | Language/Mother tongue | 21. | Work-seekers |
| 11. | Other languages known | 22. | Migrants |
| 12. | Literacy | 23. | Place of migration |
| 13. | Highest educational qualification | 24. | Reason for migration |
| 14. | Attending any educational institution or
course including correspondence course | 25. | Duration of residence |

* New items. Others are existing items continued from the previous census.