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SAMPLE SURVEYS OF CURRENT INTEREST IN INDIA

FORTY FOURTH ANNUAL REPORT, 1993

**CENTRAL STATISTICAL ORGANISATION
DEPARTMENT OF STATISTICS
MINISTRY OF PLANNING AND
PROGRAMME IMPLEMENTATION
GOVERNMENT OF INDIA
NEW DELHI**

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CENTRAL STATISTICAL ORGANISATION

शुभ कामनाओं सहित
महानिदेशक
केन्द्रीय सांख्यिकीय संगठन
सांख्यिकी विभाग, योजना तथा कार्यक्रम कार्यान्वयन मंत्रालय,
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With the compliments of
DIRECTOR GENERAL
CENTRAL STATISTICAL ORGANISATION
*Department of Statistics, Ministry of Planning
and Programme Implementation
Sardar Patel Bhawan, Sansad Marg,
New Delhi-110001, India*

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PREFACE

This is the fortyfourth report in the series "Sample Survey of Current Interest in India", being brought out by Central Statistical Organisation since 1949-50. Hindi version of this publication is also being brought out from 1979 onwards.

2. The information given in this publication relates to the latest 32 important sample surveys reported to have been initiated/continued during the preceding year by various agencies of Central and State Governments, research institutions and universities. It provides information on the objectives, coverage, survey design, organisational aspects, data collected and other related details.

3. The surveys have been arranged by broad subject groups, such as agriculture; animal husbandry; rural development; health, family welfare and vital statistics; industry, trade and finance; labour, employment and wages; and socio-economic aspects to facilitate easy reference. An agency-wise index of surveys is given in the Annex. Besides, there are other regular surveys like crop estimation surveys, surveys for estimation of major livestock products, etc., which have not been reported in this volume as there has been no material changes in their coverage, survey design or methodology.

4. This Organisation wishes to express its appreciation to all the agencies for their cooperation in supplying the information needed for the preparation of this report. Suggestions regarding possible elaborations and other improvements in the presentation and coverage of the publication are most welcome.

5. The report was prepared in the Sample Surveys Unit of the Organisation, under the guidance of Shri P. R. Dongre, Director, who was ably assisted by Shri R. D. Mishra, Joint Director (S.G.) and Shri S. D. L. Srivastava, Assistant Director. Shri Dharam Pal, Junior Investigator and Smt. Arvinder Chernalia, Stenographer, provided secretarial assistance.

Dr. S. N. RAY
Director General

CENTRAL STATISTICAL ORGANISATION,
Department of Statistics,
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Government of India,
New Delhi.
April, 1994.

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DEPARTMENT OF AGRICULTURE AND COOPERATION
MINISTRY OF AGRICULTURE
GOVERNMENT OF INDIA
NEW DELHI

1. Input Survey, 1991-92.

Introduction

1.1 As part of the Central Sector Scheme on Agricultural Census, which is being implemented in the country in each of the Five Year Plan periods since 1970-71, an Input Survey was planned and organised, for the first time in 1976-77, to collect, *inter alia*, information on application of various inputs, such as fertilizers and manures, pesticides, irrigation, livestock, agricultural implements and machinery etc., by different categories of land holdings. This survey was repeated in 1981-82 and 1986-87 with sample size, at the primary selection stage, increased from two per cent of villages in 1976-77 to seven per cent of villages in the latter two periods with a view to obtaining more reliable estimates at the District level. The scope of the survey was also expanded in 1981-82 to collect information on agricultural credit flowing to different land holdings through various institutions and also on fertilizers consumed, individually for some major crops. The current Input Survey, being fourth in the series, was conducted with the reference period 1991-92 (1st July, 1991, to 30th June, 1992). The primary objective of the survey was to provide levels of consumption of various inputs, namely fertilizers, HYV seeds, pesticides, farmyard manures/compost, agricultural implements & machinery and credit, by major size classes of holdings. Information was also collected on the extent of fragmentation of holdings. For the sake of convenience, only five classes of operational holdings conforming to marginal (below 1 ha.), small (1-2 ha.), semimedium (2-4 ha.), medium (4-10 ha.) and large (10 ha. and above) were taken. This information is, *inter alia*, required for planning the production, imports, distribution and stocks of critical inputs such as fertilizers, pesticides, credit, etc.

The survey covered the whole country, and the data were collected in respect of all types of individual and joint operational holdings except institutional holdings, from the resident cultivators of the selected villages. However, resident cultivators of the urban areas were not covered in the Input Survey. For the

purpose of this survey, 'operational holdings' is defined as "all land which is used wholly or partly for agricultural production and is operated as one technical unit by one person alone or with others, without regard to the title, legal form, size or location". The technical unit has been defined as "that unit which is under the same management and has the same means of production such as labour force, machinery and animals". It would be seen from this definition that the actual cultivator and not the owner is the unit for collection of data.

Under the Input Survey, information were collected on number of parcels; multiple cropping, separately for irrigated and unirrigated areas; use of chemical fertilizers, organic manures and pesticides separately for irrigated and unirrigated areas under major crops (area covered and quantity used); livestock (numbers); agricultural machinery and implements; and agricultural credit by size-class of operational holdings.

The data were collected in two visits separately for kharif and rabi seasons 1991-92 immediately after the agricultural operations for kharif and rabi were over in order to minimise inaccuracies due to informant's memory lapse.

Sampling design

1.2 In each State, a sample of seven per cent of the total villages was randomly selected with Tehsil/CD Block as the stratum from amongst the 20 per cent villages already selected for Agricultural Census, 1990-91. In a selected village, all the operational holdings were grouped into five size classes, viz., below 1 ha., 1 to 1.99 ha., 2 to 3.99 ha., 4 to 9.99 ha., and 10 ha. and above. Four operational holdings were selected separately from each of the above five size classes of operational holdings following simple random sampling technique. If in a particular size class the total number of operational holdings were four or less than four, then all the holdings of that size class were covered.

For rabi survey, enumerators were required to cover the same operational holdings which were covered in kharif season. In case the size of a

selected holding changed during the reference period, the area obtaining in kharif season was required to be taken as standard. For example, if a particular holding 'X' in the size group 1 to 1.99 ha. (small holding) is divided into smaller holdings in such a way that the adjoining subdivided holdings belonged to different size class (marginal holding), then the enumerator will select another holding randomly from the same size group of 1 to 1.99 ha. in place of 'X'. The required information for rabi season was also collected for that substituted operational holding.

Field work

1.3 It was provided that the Input Survey would be conducted by the State Governments through their statistical functionaries, viz., District Statistical Officers, Taluk Statistical Assistants, Progress Assistants, etc., depending upon the existing administrative set up in each State. After selection of villages, the list of such selected villages were submitted to District authorities who, in turn, were required to allot these villages to the primary workers (Investigators/Patwaris) as per time frame of the survey. The schedules and instructions were despatched to the State authorities connected with the survey during September, 1991. According to the programme, selection of villages and of holdings was to be completed by November, 1991. The field work in respect of kharif season was expected to be completed by January, 1992 and that for rabi season by 30 June, 1992. The training to the field staff and supervisory staff was given by the end of November, 1991. The supervisory level staff were trained on the various

aspects of the survey, namely objective and methodology, concepts and definitions, coverage of crops, fertilizers and pesticides, etc. For the field level functionaries, the training was given on selection of samples, filling up of the schedules and concepts and definitions. The Patwaris were required to list out the operational holdings in the villages and the statistical enumerators took these lists and selected the sample of operational holdings in these villages for canvassing various types of schedules. The supervision was done in most of the cases by the District Census Officers, Taluk Census Officers, Revenue Inspectors, etc. The District Census Officers were required to check various aspects of the field work in respect of at least five villages selected for the survey in the District. The Taluk Census Officers were required to inspect 25 per cent of the villages. The Revenue Inspectors were required to inspect cent per cent work of the Patwaris in all the villages under their circles. In addition, senior functionaries of the Revenue, Land Records and Statistical Departments of the State, were also supposed to supervise the field work done by the Statistical Enumerators. Eight types of schedules were canvassed for eliciting information including listing of operational holdings in the sample village. The survey envisaged that no fresh listing schedule for resident operational holdings be prepared. Instead, those prepared for the Agricultural Census, 1990-91, may be used. This may suitably be updated by the enumerators.

Data processing

1.4 The data collected through various schedules were processed and tabulated by the States themselves.

DIRECTORATE OF ECONOMICS & STATISTICS MADHYA PRADESH, BHOPAL

2. Socio-Economic Benchmark Survey of Gwalior Ayacut Area

Introduction

2.1 The Directorate of Economics and Statistics, Madhya Pradesh, conducted this *ad hoc* survey at the instance of the State Ayacut Command Area Development Authority. The survey was taken up with the main objectives of : (i) evaluating the impact of command area development programme as an agent of economic change in the command area, (ii) assessing the actual existing socio-economic situation of the region at the time of the survey, (iii) reviewing the policy regarding fixation of water rates with special reference to the Gwalior Ayacut Project, (iv) finding

out the nature of benefit expected to flow from the project (with special reference to the problems likely to be faced by the small and marginal farmers in taking benefits of the irrigation project), (v) reviewing the availability of infrastructural facilities and the level and pattern of private investment in agricultural and allied activities within the command area, (vi) studying the change in cropping pattern, cropping intensity, input-output structure, field level saving and investment patterns, (vii) finding out the level and pattern of development of other associated activities, such as dairying, poultry, certain processing industries and trade in agricultural commodities and (viii) assessing the pattern of employment, income and consumption amongst the selected households. The

geographical area covered by the survey was about 122 villages falling in the command area of the Gwalior Ayacut in the districts of Gwalior, Datia, Bhind, Shivpuri, Guna and Tikamgarh. The broad subject heads on which the information was collected were pattern of land use, cropping pattern, size of land holdings, production and disposal of agricultural produces, income, expenditure, indebtedness, inventory of agricultural implements, number of mandays and bullock days used in various agricultural operations and use of agricultural inputs, etc. Data were collected with reference to agricultural year 1988-89 for agricultural statistics and for household income and crop-wise production and sale with reference to the financial year 1988-89.

Sampling design

2.2 A two-stage stratified sampling design, with villages as the first stage units and household possessing land as the second stage units, was adopted for the survey. At the first stage, from amongst the villages falling in the command area, 122 villages were selected following simple random sampling technique. At the second stage, all the households in the selected villages were grouped into operational holding size classes. These were (i) marginal farmers having land upto 1 ha., (ii) small farmers having size of holdings from 1 to 2 ha., (iii) semi-medium farmers possessing land over 2 ha. to 4 ha., (iv) medium farmers having land above 4 ha. to 10 ha., and (v) large farmers having land above 10 ha. From each selected village, five households were selected, i.e., one household from each category. The total sample size thus selected

consisted of 122 villages and 610 cultivators possessing operational land holdings.

Field work

2.3 The field work was conducted during 21 March, 1990, to 20 May, 1990, by spending 1,792 mandays. Data were collected through field enumeration method by seeking oral information from respondents. The primary data were collected with the help of five investigators and 34 block level investigators. The supervision was done by senior level officers including seven Assistant Statistical Officers, one Deputy Director, one Divisional Deputy Director and two Assistant Directors. Before the start of the field work, one-day training was imparted to the field workers and the supervisors. Data were collected through four types of schedules and on an average two to three hours were spent for filling in a schedule besides the time taken for the listing schedule.

Data processing

2.4 Pre-tabulation processing of data was done by ten persons—eight for scrutiny jobs and two for editing jobs. About 120 mandays were spent at the central office for pre-tabulation processing of data. The tabulation work was done manually with the help of facit and electronic calculators. 120 mandays were spent on tabulation of data. With a view to ensuring accuracy in tabulation, hundred per cent verification was done. The first set of tables were completed in August, 1991, and the report was expected to be released by December, 1992. The survey was expected to cost about Rs. 70,000/-

DIRECTORATE OF ECONOMICS AND STATISTICS, MAHARASHTRA, BOMBAY

3. 'Training and Visits', Programme of Agricultural Extension in Maharashtra

Introduction

3.1 The Directorate of Economics and Statistics, Maharashtra, Bombay, conducted this *ad hoc* survey at the instance of the Planning Department of the State. The main objectives of the survey were (i) to find out as to how far the cultivators were aware of the modern agricultural practices and were induced to bring them into practice and how many of them were presently using the modern agricultural techniques, (ii) to assess the awareness of new research in agriculture by Agricultural Extension Officers along with the basic objectives of the implementation of the scheme, (iii) to find out how far the objectives of the

scheme had been achieved, (iv) to investigate the shortcomings, if any, in the scheme and the remedial measures for solving them, (v) to find out if the scheme has helped in increasing production, productivity and general economic conditions of the cultivators covered under the scheme. The broad subject heads covered by the survey were the functions of implementing agencies of the scheme, agricultural messages delivered to the farmers and the effects of utilisation of modern agricultural technology under the scheme. The reference period in respect of data on expenditure incurred under the scheme were 1983-84 to 1989-90 and in respect of number of meetings held by the District Technical Committee it was 1985-86 to 1989-90.

Sampling design

32. At the first stage, out of the list of agricultural sub-divisions in the 29 Districts selected, 81 agricultural sub-divisions were selected for the survey. Thereafter, three villages from each sub-division were selected circular systematically. From each selected village, 12 farmers were selected following random sampling technique. The total sample size thus selected consisted of 29 districts, 81 agricultural sub-divisions, 243 villages and 2,714 farmers.

Field work

3.3 The field work was conducted during the period August-October, 1990. The data were collected through field enumeration method by seeking oral information from respondents and by going through office records. The field work was done by the regular staff of the Directorate of Economics and

Statistics placed at divisional and District level. The supervision of the field work was done by Research Assistants, Research Officers and the District Statistical Officers posted at regional and District offices.

Data processing and Report

3.4 Data collected through 3,776 schedules of different types were processed. The pre-tabulation processing and the tabulation work was done by the regular staff at the headquarters. The tabulation work was done manually except in case of beneficiary schedule which was done with the help of computer. The first set of tables and draft report were ready by April 1992. The final report entitled "Training and Visits Programme of Agricultural Extension in Maharashtra" was yet to be published at the time of reporting the survey.

INDIAN AGRICULTURAL STATISTICS RESEARCH INSTITUTE, NEW DELHI

4. Pilot Sample Survey for Evolving a Sampling Methodology for Estimation of the Area and Yield of Cultivated Fodder Crops other than Jowar and Berseem—Cost of Production and Cultivation Practices thereof.

Introduction

4.1 This was an *ad hoc* survey conducted by the Indian Agricultural Statistics Research Institute, New Delhi, with the main objectives of (i) evolving a sampling methodology for estimating, with reasonable precision, the area, yield and production of fodder crops in the region, (ii) enquiring and collecting data on cultivation practices along with the cost of cultivation, and (iii) studying the cost of fodder crops. The survey was conducted in Ghaziabad District of Uttar Pradesh. The broad subject heads of data collection were the general information about selected villages, fodder fields cultivated, yields of the selected field/plot, agricultural practices followed, and the cost of cultivation. The data were collected on seasonal pattern during sowing and harvesting seasons.

Sampling design

4.2 A stratified multi-stage sampling design was adopted with tehsils as strata, villages in each stratum as primary units, the fields in the selected village as the second stage units and the plots of specified size in the selected fields as the ultimate sampling units. In the District of Ghaziabad, all the five tehsils were taken as strata. The selection of villages, at the

first stage, was done proportionately from each stratum with probability proportional to size with replacement. From each village selected at the first stage, about 10 to 15 fields of the fodder crops were selected during each season as the second stage units following PPSWR technique. Thus, a total of 75 villages were selected at first stage. The number of fields selected differed from season to season.

Field work

4.3 The field work was commenced in July, 1991, and completed in September, 1992, by spending about 330 mandays. Five field investigators collected data on various aspects of the survey under the supervision of senior level officers. The field staff were imparted necessary training before their deployment in the field. Data were collected through field enumeration method and by actually conducting crop cutting experiments. Direct measurement and oral information were used for filling up the schedules. Each field worker was assigned 15 villages and was required to canvass necessary schedules for these villages. About 3,000 schedules were canvassed during the course of survey.

Data processing

4.4 Three persons were engaged on pre-tabulation processing of data. It took about two months to complete the pre-tabulation processing of data. The tabulation and other associated work was still in progress when the survey was reported.

DEPARTMENT OF DAIRY DEVELOPMENT UTTAR PRADESH, LUCKNOW

5. Survey to Estimate the Availability of Milk for Sale in the Areas Covered under Dairy Unions.

5.1 The survey was earlier reported at Sl. No. 10 in the 43rd Annual Report for surveys conducted in the Districts of Lakhimpur Kheri, Jhansi, Bahraich, Sidharth Nagar, Maharajganj, Greater Noida and

Rampur. During the year under reference, the Department of Dairy Development, Lucknow, conducted this survey, following the methodology adopted earlier, in the Districts of Azamgarh, Mau, Tehri, Pauri, Pithoragarh, Lalitpur, Sonbhadra, Mirzapur and Pratapgarh, in the State of Uttar Pradesh. The survey was conducted in different phases.

INDIAN AGRICULTURAL STATISTICS RESEARCH INSTITUTE, NEW DELHI

6. Pilot Sample Survey for Developing a Sampling Methodology for Estimation of Post-Production Loss of Milk in Rural Areas.

6.1 This was earlier reported at Sl. No. 8 in the 43rd Annual Report for survey conducted in the

Rohtak District of Haryana. The survey was started in July, 1991, and by the end of March, 1993, the data collection work was completed. At the time of reporting the survey, analysis of data was in progress.

7. Pilot Survey to Study the Economics of Angora Rabbits.

Introduction

7.1 This was an *ad hoc* survey conducted by the Indian Agricultural Statistics Research Institute, New Delhi, under ICAR with the main objectives of (i) obtaining reliable estimates of cost of rearing and maintenance of rabbits and (ii) estimating the cost of production of rabbits with a reasonable degree of precision. The survey was conducted in Kullu tehsil of Kullu District of Himachal Pradesh. The broad subject heads under which the information was collected were quantity and composition of feed, mortality, health services, labour input—both paid and unpaid and service details of rabbits.

Sampling design

7.2 A uni-stage random sampling design was adopted for the survey with rabbit farms as the unit of sampling for estimates of rearing costs. From a total of 67 rabbit farms in the Kullu tehsil of Himachal Pradesh, 18 rabbit farms were selected randomly for the detailed study. Information on all rabbits in the selected farms was collected at regular weekly intervals during the course of the survey. The farms selected were kept fixed for the entire period of detailed enquiry.

For estimating the maintenance cost of adult rabbits, the already selected 18 farms formed the first stage units and the adult rabbits as the second stage units. The selection of second stage units was done with

equal probability without replacement. A sample of ten rabbits (five females and five males) from each first stage unit was drawn. Thus, a total of 180 rabbits were selected for estimating the maintenance cost of rabbits.

Field work

7.3 The field work was started in the month of June, 1992, and was expected to be completed in November, 1993, by spending about 940 mandays. Data were collected through field enumeration method by seeking oral information from respondents and by actual observations. The field work was conducted by the field investigators under the supervision of project leader and field officer who conducted concurrent and post-enumeration checks in the field. The field staff were imparted necessary training before the commencement of the survey. Data were collected through two types of schedules—one for complete enumeration and the other for collection of information on maintenance and rearing cost from the sampled units. On an average, four to five hours were taken for filling up the schedule for the detailed study.

Data processing

7.4 The data processing in respect of schedules canvassed during the course of survey was being done by two Technical Assistants at the headquarters of the Institute. The tabulation was being done by the Institute staff with the help of calculators and personal computers. The total cost of the survey was expected to be around Rs. 7.8 lakhs.

MINISTRY OF RURAL DEVELOPMENT NEW DELHI.

8. Concurrent Evaluation of Jawahar Rozgar Yojana (1st Round)

Introduction

8.1 The Ministry of Rural Development, New Delhi, conducted the first round of the Concurrent Evaluation of the Jawahar Rozgar Yojana (JRY) during 1992 with the main objective of assessing the impact of the scheme on the target population. The broad subject heads under which the information were collected under the evaluation programme was identification particulars of the panchayat, members of the panchayat, population of the panchayat, annual income of the panchayat, allocation of funds to the panchayat during 1991-92, unspent balance of previous year, total expenditure during the year, details of works proposed to be undertaken under the JRY during the current year or included in the Annual Action Plan of the panchayat, technical approval of the block before the execution of the works, identification particulars of the JRY workers, occupational background, household size of the workers, total annual income of the family from all sources, actual wages paid per day, periodicity of the payment of the wages, number of mandays of employment generated during the last 30 days, etc. The reference period for collection of information differed from item to item. Thus, for example, for population of panchayat 1990-91 census figures were utilised, for income of panchayat the financial year 1990-91 was the reference period, for receipts of funds the reference period was the financial year 1991-92 and for other major items information was collected as on the date of survey.

Sampling design

8.2 A stratified three stage sampling design was adopted for the survey to be conducted for the Concurrent Evaluation of the JRY. The Districts, Blocks and village panchayats formed the sampling units at the three stages respectively. The survey envisaged to cover all the Districts in the country in rotation. Selection of sample Districts were to be done after stratification according to State boundaries, geographical contiguity and workload distribution among the participating institutions. From each District, a sample of two Blocks was drawn on random basis. From each sample Block, five village panchayats were

selected randomly. The selection of the Districts and Blocks was done at the central level. The selection of village panchayats was done by the institutions associated with the survey, using the random number table provided by the centre. In each selected village panchayat, all JRY works which were taken up during the current financial year were covered for the detailed study. The total sample size consisted of all JRY works undertaken during the current year in about 4,500 village panchayats (comprising five panchayats per Block in each of the two Blocks selected from about 450 Districts for the survey). Besides collecting details about JRY works, a sample of five labourers who have been the beneficiaries of JRY employment were interviewed in each village panchayat covered under the survey.

Field work

8.3 The field work was conducted during January-December, 1992, by reputed institutions in different States. The data were collected through field enumeration method by seeking oral information from respondents, by going through office records and through independent research. The field work was to be done by the institutions involved in the programme by their own field worker deployed locally. The supervision was also done by their own senior officers. As a training programme, the Ministry of Rural Development organised training conference for all the research institutions who further imparted training to their various functionaries. The manual of instructions and schedules were supplied by the Ministry. The supervision of field work was also done by the senior officers of the Ministry of Rural Development from time to time. A total of 4,510 panchayat schedules and 22,250 worker schedules were canvassed during the course of the survey.

Data processing and Report

8.4 The data processing in respect of information collected through a total 26,760 schedules was still in the process of tabulation, etc., in the Ministry of Rural Development, through computer. One Programmer and four Data Entry Operators were engaged on the data processing and tabulation jobs. The preliminary report had already been brought out in April, 1993 and the final report was still in process.

9. Concurrent Evaluation of Integrated Rural Development Programme (IRDP)-IVth Round

Introduction

9.1 The Ministry of Rural Development has been conducting concurrent evaluation study of IRDP since 1985 with the help of reputed research institutions situated in different parts of the country. The first round of the survey was undertaken during the 12 months period October, 1985 to September, 1986, the second round during the 12 months period January-December, 1987 and the third round during January-December, 1989. Thus, this was the fourth round of the survey which was conducted with the main objectives (i) to streamline and improve the pace of implementation of the Integrated Rural Development Programme, (ii) to assess the impact of the programme and (iii) to assess the present status of old beneficiaries surveyed during the third round of the programme. The entire rural population of the country was covered under the survey. The broad subject heads under which information was collected were the identification particulars of beneficiaries, provision of assets, details of benefits received, details of loan, current status of assets (for old beneficiary), insurance, Training of Rural Youth for Self Employment (TRYSEM), training (other than TRYSEM), linkages and after care, beneficiaries' indebtedness (for old beneficiary), income from assets (for old beneficiaries), etc.

Sampling design

9.2 The sampling design continued to be a four stage stratified sampling with District, Block, village and beneficiary family respectively as the first, second, third and fourth stage units for the survey. The country was divided into 39 strata each consisting of 12 Districts. The programme envisaged the selection of 38/39 Districts, every month from the 39 strata. One District from each stratum was selected at random every month so that all the Districts were covered in 12 months. From each District, two Blocks were selected centrally using the revised Directory of Blocks.

The frame consisted of the list of Districts in the States, list of Blocks under the Districts and list of Block-wise IRDP beneficiary families.

From each stratum, one District was selected at the first stage and at the second stage two Blocks were selected at random from each selected District. Normally, the two Blocks selected in the fourth round were different from those surveyed in third round of the survey. If the number of Blocks was less than three in a District, no selection of Blocks was done.

The list of Districts and Blocks selected at the headquarters of the Ministry of Rural Development were communicated to the participating institutions who carried out the job of selection of villages and beneficiary families. The beneficiaries consisted of two sets of families: (i) old beneficiary families, who were assisted/provided the assets during the third round of the survey, i.e., during January-December, 1989, or were given subsequent doses of assistance to cross the poverty line, and (ii) new beneficiary families who were assisted/provided the benefits for the first time during the last six months period preceding the date of survey. For selection of two villages/village clusters separately for old and new beneficiaries, villages/village clusters were arranged in descending order of the number of beneficiary families. From the list only those villages/village clusters which consisted of five or more beneficiary families were considered for sample selection. Villages were selected separately for old and new beneficiary families. Out of the total number of villages/village clusters having five or more old beneficiary families two villages/village clusters were selected at random for the survey of old beneficiary families. Similarly, another set of two villages/village clusters were selected at random for studying the new beneficiary families. The beneficiary families, to be selected at the fourth stage, were selected following liner systematic sampling procedure from a selected village/village cluster. For this purpose, separate lists for old and new beneficiary families were prepared in the selected villages/village clusters according to the order in which their names appeared in the Block register. From these lists, ten old beneficiary families were selected from two sample villages/village clusters at the rate of five from each village and ten new beneficiary families were selected from the other two sample villages/village clusters again at the rate of five from each sample village. Thus a total of 20 beneficiary families (old and new put together) were selected from one sample Block. Another 20 families were selected from the second sample Block. In all, 40 beneficiary families were selected from eight villages from the two Blocks in a District. Thus, for every month, normally 760 old and 760 new beneficiary families were envisaged to be covered from 76 selected Blocks in 38 Districts covered for the survey.

Field work

9.3 The field work of the survey was conducted by 44 research institutions during the period September-October, 1992, to August-September, 1993. The information was collected by field enumeration method through prescribed schedules and by going through the record of IRDP/Blocks/banks and by seeking oral

information from the IRDP beneficiary families. The field work and supervision was done by the staff engaged by the institutions involved in the programme. However, central staff also conducted surprise checks of field work from time to time. Before the actual field work was undertaken, the Ministry of Rural Development organised a training conference for all the research institutions and schedules to be canvassed were supplied by the Ministry. The data were col-

lected through household schedules each for new and old beneficiary families. A total of 19,000 schedules were expected to be canvassed during the course of the survey.

Data processing

9.4 The data processing and tabulation was yet to be taken up by the Ministry of Rural Development.

DEPARTMENT OF LABOUR AND EMPLOYMENT, HARYANA, CHANDIGARH

10. An Assessment Study of Development of Women and Children in Rural Areas (DWCRA)

Introduction

10.1 The Development of Women and Children in Rural Areas, a sub-scheme of Integrated Rural Development Programme (IRDP), was started in 1982-83 by the Government of India with the assistance of UNICEF. The primary objective of the study was to focus attention on the women members of rural families below poverty line with a view to providing them with opportunities of self-employment on sustained basis. The women members of DWCRA form groups of 10-15 women each for taking up economic activities suited to their skills, aptitudes and the local conditions. The group strategy was adopted to motivate the rural women to come together and to break social bonds which had denied them income generating and self-fulfilling opportunities. The group approach has been extended to all Districts in the country for greater coverage of women under IRDP with effect from January, 1991. Initially, the scheme of DWCRA was started in 50 selected Districts, as a pilot project and since then, the programme has been extended to more Districts in a phased manner. As on 31 December, 1990, DWCRA was being implemented in 187 Districts all over the country. The Government of India decided to cover all Districts under DWCRA by the end of the Eighth Plan and for this purpose 50 additional Districts are added to the coverage of the scheme beginning with 1991-92.

The scheme visualises an on-going participative evaluation of the programme to be conducted by the Gram Sevika, Mukhya Sevika and members of the group.

The Government of Haryana conducted this study in six Districts namely Sonapat, Gurgaon, Sirsa, Rohtak, Rewari and Mahendragarh.

Sampling design

10.2 A list of DWCRA groups functioning as on 30 June, 1991, was procured from the concerned District Rural Development Agencies and a sample of ten per cent was drawn keeping in view that the maximum number of trades were taken and due representation was given to all the Blocks in a District. Due to this consideration, the total sample in some Districts came to more than ten per cent. From each selected group, at the first stage, two beneficiaries were interviewed for detailed information.

Field work

10.3 The field work was started in the month of April, 1992, in Sonapat and Rohtak Districts; in May, 1992, in Gurgaon, Mahendragarh and Rewari Districts; and in June, 1992, in Sirsa District. The field work for Sonapat and Rohtak was completed in October and November, 1992 respectively; for Sirsa, Gurgaon and Mahendragarh in December, 1992; and that for Rewari in January, 1993. The mandays spent in the Districts of Sonapat, Rohtak, Gurgaon and Rewari were respectively 28, 10, 60 and 20, and 55 each for Sirsa and Mahendragarh. Data were collected through field enumeration method by going through office records, by seeking oral information from respondents and by mail questionnaires despatched to various agencies. Whereas the Assistant Project Officer completed the questionnaires themselves, those for Gram Sevikas, group organisers and beneficiaries were canvassed by the field staff of the Manpower and Employment Coordination Cell of the Department of Labour and Employment. In each District, one field investigator was appointed, who did the field work in addition to his other regular jobs. Supervision of the field work was done by Manpower and Employment Coordination Officer, by Research Officer of the

Coordination Cell and by the District Statistical officers at District level. About 220 schedules were canvassed during the course of field investigations which consisted of 6 schedules for Assistant Project Officers, 36 schedules for Gram Sevikas, 59 schedules for group organisers and 119 schedules for beneficiaries.

Data processing

10.4 The data processing was done by one Assistant Research officer and was completed in 130 mandays. The tabulation work was done manually. The report on the study was at the drafting stage when the survey was reported.

DIRECTORATE OF ECONOMICS AND STATISTICS, MAHARASHTRA, BOMBAY

11. Quick Evaluation Study of Sanjay Gandhi Swavalamban Yojana

Introduction

11.1 This was an *ad hoc* survey conducted by the Directorate of Economics and Statistics, Maharashtra, at the instance of the Planning Department of the State. The main objectives of the survey were to study (i) whether the scheme was implemented as per the procedures laid down and, if not, the bottlenecks in the implementation, (ii) whether the beneficiaries fulfill the norms required for receiving assistance and whether the assistance received was fully utilised and (iii) whether there has been any improvement in the economic conditions/standard of living due to self-employment created by the loan assistance offered to beneficiaries under the scheme. The period of reference for collection of information was 1985-86 to 1991-92 for number of beneficiaries; 1989-90 to 1991-92 for receipt of applications and sanction of assistance; 1990-91 to 1991-92 for utilisation of assistance availed; 1990-91 for employment generated due to assistance availed; and the date of survey for the repayment of loans overdue, etc.

Sampling design

11.2 From the list of Districts in the State, seven Districts were selected at the first stage. At the second stage, from each selected District, one tehsil, which had the highest number of beneficiaries during 1989-90 and 1990-91 taken together, was selected. In case of urban area, Karvirr tehsil was selected. At the third

stage, from the tehsil, one village, having the highest number of beneficiaries during the years 1989-90 and 1990-91 taken together, was selected for the survey. From each selected tehsil, for the rural area, one Municipal Council was selected at random. In each village selected in a District, ten beneficiaries were selected. In the urban areas, a total of 40 beneficiaries were selected. Thus, a total of seven Districts, seven tehsils in the rural area and one tehsil in the urban area, and 110 beneficiaries were selected for the survey.

Field work

11.3 The field work was done during 8—25 June, 1992. The data were collected through field enumeration method by seeking oral information from respondents and by going through office records. The field work was done by the regular staff of the Directorate under the supervision of senior level officers. The data were collected through three types of schedules, namely Schedule-1 for eliciting information from implementing agency at the District level, Schedule-2 for details from tehsils and Schedule-3 for eliciting detailed information about beneficiaries of the scheme.

Data processing

11.4 All the schedules canvassed during the course of the survey were processed by one Research Assistant and one Statistical Assistant. The tabulation work was done manually by the same set of officials under the supervision of senior level officers.

12. Evaluation Study of Construction of Percolation Tanks under Employment Guarantee Scheme

Introduction

12.1 This was an *ad hoc* survey conducted by the Directorate of Economics and Statistics, Maharashtra at the instance of the Department of Planning in the State. The main objectives of the study were to find

out (i) the present conditions of the tanks constructed, (ii) expenditure incurred on construction, capacity of the tanks and actual storage, (iii) present status of maintenance and repairs of these tanks, and (iv) the proportional increase in the irrigated area in the command area of the tanks and benefits derived by the beneficiaries. The survey was conducted in 13 Districts covering all the Divisions of the State. The broad

subject heads under which the information was collected were the complete and incomplete status of the percolation tanks, expenditure incurred on the construction of percolation tanks, storage capacity of the tanks, maintenance and repairs and cropping pattern and increase in the production of crops. The data were collected with reference to 1971-72 to 1988-89 for position of works undertaken, complete or incomplete, and potential created; 1985-86 to 1988-89 for expenditure incurred on works and status of works; 1988-89 to 1992 for capacity of water storage in the tanks; 1988-89 to 1990-91 for maintenance and repairs; and 1990-91 for changes in the cropping pattern and increase in production.

Sampling design

12.2 A mixed sampling design was adopted for selection of sampling units at various stages. Thus, for selection of Districts and tehsils purposive sampling was adopted; systematic sampling was adopted for selection of tanks; and random sampling technique was adopted for selection of beneficiaries.

The frame for selection of percolation tanks consisted of those tanks which were taken up for construction during the years 1971-72 to 1988-89. The construction of percolation tanks under the Employment Guarantee Scheme were taken up mostly in drought prone areas, and accordingly, selection of Districts was done from such areas only. Thus, three Districts each from Pune and Aurangabad Divisions, one District from Konkan Division (as the number of percolation tanks was very small), and two Districts each from the remaining three Divisions of the State were selected. In all, 13 Districts of the State were selected at the first stage. From each District, three tehsils having the highest number of completed works were selected at the second stage. From the three tehsils in each District, a sample of 13 completed and seven incomplete tanks was drawn at the third stage by using systematic sampling method. If the number of completed and incomplete works was found to be less than 13 or 7 in the three tehsils, all of them were selected. Thus, 155 completed and 75 incomplete works were taken as the total sample for the survey.

In the command area of completed works, two strata were formed with equal parts considering the

distance of the bund and the boundary of the command area where the map of the command area was available, and one village from each of the two strata was selected at random. In case the map was not available, the command area was divided into two parts; the first part with the area falling within a distance of 2 km. from the tank and the second part falling between 2 to 4 km. from the tank. The selection of villages was on the same pattern as that for the area having maps. At the last stage, three beneficiaries (cultivators having wells) each were selected by using random sampling technique from the selected villages of each stratum. The total sample size thus selected consisted of 13 Districts, 155 completed and 75 incomplete percolation tanks and 801 beneficiaries having irrigation wells.

Field work

12.3 The field work was done during 15 February-16 April, 1992. Data were collected through field enumeration method by seeking oral information from respondents and by going through establishment records. The data collection was done by the regular staff of the Directorate of Economics and Statistics under the supervision of senior level officers. The data collection was done through four types of schedules, namely Schedule-1 from executive engineers of the different command areas; Schedule-2 for selected tanks; Schedule-3 from village level officials and Schedule-4 for beneficiaries. The total number of schedules canvassed respectively for the four types were 25, 230, 169 and 801.

Data processing

12.4 All the 1,225 schedules canvassed during the course of field investigation were processed by one Research Assistant and one Statistical Assistant of the Directorate of Economics and Statistics. The tabulation work was done manually by the staff of the Directorate. Since both pre-tabulation processing and tabulation work was done along with other official assignments of the staff, separate figures could not be arrived at for the mandays involved on these processes. The tabulation and other data processing jobs were supervised by the senior level officers of the Directorate.

13. Quick Evaluation Study of the Nehru Rozgar Yojana

Introduction

13.1 This *ad hoc* survey was conducted at the instigation of the Planning Department of the Government

of Maharashtra by the Directorate of Economics and Statistics, Bombay. The main objectives of the survey were (i) to study the lacuna in the implementation of the scheme, (ii) to find out the proportion of urban people who were assisted under the micro enterprises scheme, (iii) to ascertain types of assets created under

the urban wage employment scheme, (iv) to study the employment generated under the urban wage employment scheme, and (v) to study the socio-economic conditions of the beneficiaries. This was a State level survey conducted in 29 Districts of the State. The broad subject heads under which the information was collected were types of assets created, proportion of urban people benefitted and socio-economic background of the beneficiaries. The data on employment were collected with reference to the year 1991-92 and on assets with reference to the years 1989-90 to 1991-92.

Sampling design

13.2 From each of the 29 Districts, where the survey was conducted, one Municipal Council, which incurred the highest expenditure under the two schemes, namely, urban micro enterprises scheme and urban wage employment scheme during the years 1989-90 to 1991-92, was selected. At the second stage, from each Municipal Council, out of the beneficiaries under urban micro enterprises scheme, ten beneficiaries were selected following simple random sampling technique. Similarly from each selected Council, out of the beneficiaries who secured employment under the urban wage employment scheme during the year 1991-92, ten beneficiaries were selected following simple random sampling technique. The total sample size thus selected consisted of 29 Municipal Councils, 290 beneficiaries under the urban micro enterprises scheme and 245 beneficiaries under the urban wage employment scheme.

Field work

13.3 The field work was conducted during May-June, 1992, and information on various aspects of the schedule were collected through field enumeration method by seeking oral information from respondents and by going through office records. The field work was conducted by the regular field staff of the Directorate of Economics & Statistics placed at the Divisional and District level. The supervision of the field work was done by the Research Assistant, Research Officer and District Statistical Officer posted at Regional and District Offices. No norms for supervision of the field work was, however, decided in view of the fact that both the field work and the supervision were done along with other official assignments of the officials engaged on these jobs. Three types of schedules were canvassed : Schedule-1 for Municipal Councils; Schedule-2 for beneficiaries under urban micro enterprises scheme; and Schedule-3 for beneficiaries under urban wage employment scheme.

Data processing and Report

13.4 A total of 29 Schedule-1, 290 Schedule-2 and 245 Schedule-3, canvassed during the course of the field investigation, were involved in the data processing. The pre-tabulation processing of data was done by one Deputy Director, one Research Assistant and two Statistical Assistants at the Central Office. The tabulation of data was done manually at the headquarters. The first set of tables were ready by October, 1992, and the report entitled "Quick Evaluation Study of Nehru Rozgar Yojana in Maharashtra" was yet to be published.

GOKHALE INSTITUTE OF POLITICS AND ECONOMICS, PUNE

14. Evaluation Study of 'Self Employment to Educated Unemployed Youth' and 'Self Employment Programme for Urban Poor' Schemes

Introduction

14.1 This was an *ad hoc* survey conducted by the Gokhale Institute of Politics and Economics, Pune, at the instance of the Bank of Maharashtra, Pune. The main objectives of the survey were : (i) to assess the general performance of the schemes; (ii) to assess the recovery performance of the beneficiaries of the schemes; and (iii) to identify the problems, if any, and suggest remedial measures. As far as the Bank of Maharashtra was concerned, 80 per cent of the beneficiaries under both the schemes were in the State of Maharashtra and of the rest 20

per cent, 8—10 per cent beneficiaries were in the State of Madhya Pradesh. Hence the Bank of Maharashtra decided to sponsor the survey in the two States only. The estimates were required at District and State level. The broad subject heads under which the information on various aspects of the survey was collected were (i) primary as well as personal information of beneficiaries, (ii) information about ventures/activities for which the beneficiaries have availed of the loan facilities, (iii) information about loan taken, (iv) information about difficulties faced by the beneficiaries and (v) repayment performance. A pilot survey was conducted at Aundh in Pune District for finalisation of various proforma and questionnaires used for collecting data on various aspects of the survey. The reference period for most of the items in the question-

naire was July, 1991—June, 1992. In case of repayment performance, the reference period was the period beginning with the opening of the account to 31st March, 1992.

Sampling design

14.2 A three-stage sampling design was adopted for the survey and Districts, bank branches and beneficiaries under the two schemes were the samplings units respectively at the three stages.

For proper geographical representation, it was decided to cover two Districts in each of the regions of Maharashtra, namely Western Maharashtra, Konkan, Marathwada, and Vidarbha and two Districts from Madhya Pradesh. It was, however, ensured that backward and developed regions should simultaneously be represented in the selection of Districts at the first stage. In case of Maharashtra, however, since the coverage by the scheme 'Self Employment Programme for Urban Poor' in and around cities like Pune, Nagpur and Aurangabad was sizeable, these Districts were selected for the survey. The other Districts selected from Maharashtra were Kolhapur, Thane, Ratnagiri, Parbhani and Yavatmal. In Madhya Pradesh, Indore and Chhindwada Districts were selected. For selection of two bank branches from each of the District, at the second stage, it was decided that one of the branches should be in the vicinity of the District town or in the District town itself, and the other should be in the semi-urban area. These branches were also selected with the consideration that they served sufficient number of beneficiaries under the two schemes. In order to net adequate number of samples of branches at the second stage, more than two branches had to be covered in certain Districts. For selection of beneficiaries at the third stage, listing of beneficiaries under the two schemes was done since

the inception of the schemes in the two States. The beneficiaries were selected from the two schemes following systematic sampling technique.

Field work

14.3 The field work was started in the month of July, 1992, and was completed by June, 1993. About 450 mandays were spent on the field work. Data were collected through field enumeration method by seeking oral information from respondents and by going through office records. The field work was done by seven Investigators under the supervision of one senior level staff of the Institute. Investigators were also deployed on local and *ad hoc* basis, wherever necessary. They were given one week's training before their deployment in the field. Data were collected through a single type of questionnaire, canvassed for both the schemes. On an average, each Field Investigator was to conduct five interviews per day. It took about 30 minutes to collect data in one questionnaire. In case of non-availability of the respondents, revisits were made to ensure maximum response.

Data processing

14.4 The pre-tabulation processing of data was done by five persons, one each engaged on scrutiny/editing and coding and three on data entry/programming. About 75 mandays were spent on pre-tabulation processing of data. The tabulation was done with the help of personal computers and about 350 machine hours and 88 mandays were spent on data tabulation. The verification of data tabulated was done on hundred per cent basis. Validation checks were also used in order to ensure correctness of information tabulated. The report on the survey was still under preparation at the time of reporting the survey. The survey was estimated to cost about Rs. 2.5 lakhs.

MINISTRY OF HEALTH AND FAMILY WELFARE, NEW DELHI

15. National Family Health Survey

Introduction

15.1 The Ministry of Health and Family Welfare has sponsored the development of 18 Population Re-

search Centres (PRC) which are located in Universities and Institutes of national importance throughout the country. In 1990-91, the Ministry initiated the project to strengthen the survey research capabilities of the Population Research Centres with financial support from the Government of India and United

States Agency for International Development (USAID). The National Family Health Survey (NFHS) is being undertaken as one of the important components of the PRC project.

The NFHS covers the population in 23 States and the Union Territory of Delhi covering about 97 per cent population of the country. It is a household survey with an overall sample size of approximately 90,500 ever-married women in the age group of 13-49. Because of the scale of this undertaking, the survey is being implemented on a State-by-State basis, in three phases, in 1992 and 1993. The Ministry of Health and Family Welfare has designated the International Institute for Population Sciences (IIPS), Bombay, as a nodal agency responsible for providing coordination and technical guidance for the NFHS. The PRCs are conducting the survey in collaboration with a number of Indian consulting organisations. Each consulting organisation is responsible for facilitating survey activities in one or more States covered by the NFHS. Technical assistance in the programme is provided by the East-West Centre, Honolulu, Hawaii, U.S.A.

The main objectives of the NFHS were (i) to provide State level and national level estimates on fertility, family planning, maternal and child health care, and infant and child mortality; (ii) to collect information on health related aspects such as immunisation, breast feeding and ante-natal check up; and (iii) to study the socio-economic correlates of fertility, family planning and maternal and child health. The information thus collected would be a tool for policy makers and programme administrators in planning the strategy for improving population welfare.

Sampling design

15.2 The sampling sizes for the smaller States with population less than or equal to 25 million was 3,000 households and for larger States with population more than 25 million was 4,000 households. The sampling design for the rural areas of a State was essentially a two-stage stratified sampling with villages as the primary sampling units. The villages in a State were stratified into 9-15 strata considering the following two broad categories of stratification: (i) geographical location and (ii) structural variables, such as (a) distance of village from nearest town, (b) size of village, (c) availability of Government health facilities in a village, and (d) percentage of males engaged in non-agricultural activities. The variables for each State were considered separately. For each State, a few important variables were selected for the purpose of stratification. The selection of variables was done using principal component analysis. Finally, villages in a stratum were ranked according to their level of

female literacy and selection was made following probability proportional to size (PPS) systematic sampling technique. In order to have sufficient gains from the implicit stratification, it was decided to select about 7-11 villages from each stratum. At the second stage, roughly a constant number of 30 households were selected from each selected village following systematic sampling technique, keeping the final sampling self-weighting (except for the possible over-sampling in urban areas).

In urban areas, the cities and towns were divided into three strata, namely (i) self-selected cities; (ii) District headquarter towns and (iii) other towns. The big cities in the urban areas were grouped into self-selected stratum and the selection was done using specified procedure giving due consideration for their size. For this stratum, a two-stage sampling was adopted. At the first stage, appropriate number of blocks, in proportion to their size, were selected systematically after taking into account their geographical locations. At the second stage, 10-15 households were selected systematically from each selected block. A similar procedure was followed in case of District headquarter towns falling in stratum-2. However, in stratum-3, comprising other towns, a three-stage sampling design was adopted. The towns were arranged according to their geographical location and selection of required number of towns was made following probability proportional to size. At the second stage, 3-4 blocks were selected systematically from each selected town and finally at the last stage, 10-15 households were selected from each selected block following systematic sampling technique.

Field work

15.3 The field work was conducted by the agencies involved with the survey. The field investigators and supervisory staff were engaged by the agencies either by deploying their own staff or through locally employed staff. Other arrangements like supervision and training, etc., were to be done by the agencies conducting the survey. Data were collected through three types of questionnaires, namely: (i) household questionnaire; (ii) woman's questionnaire; and (iii) village level questionnaire. The overall content and format of the questionnaires was determined in a Questionnaire Design Workshop during 1991 at Pune. In addition to a standard set of questionnaires in all States, it was decided at the Workshop that the individual States could recommend a number of State-specific questions which would be formulated after considering the issues of importance in a State. The household questionnaire was used to list all usual residents of each sample household plus visitors who slept in the household on the night before the interview. Basic in-

formation relating to characteristics of each listed person, including their age, sex, marital status, relationship with the head of the household, education and occupation, were collected through the household schedule. This information was used to identify the women eligible for collection of data through the woman's questionnaire. The woman's questionnaire was used to collect information from all eligible women, usual residents of the household as well as visitors who slept in the household the night before the

household interview. The questionnaire broadly covered the information like background, characteristics, marriage, reproductive history, knowledge and use of contraceptives, pregnancy and breast feeding, immunisation and the health of children and fertility preferences. In addition, the weights and measurements of heights of all the sample women's children born since January, 1988, were also recorded by the field investigators.

ECONOMIC AND STATISTICAL ORGANISATION, HARYANA, CHANDIGARH

16. Evaluation Study of T.B. Control Programme in Haryana

Introduction

16.1 This was an *ad hoc* survey conducted by the Economic and Statistical Organisation, Haryana, with the main objectives (i) to study the performance of T.B. Control Programme at different level of medical and health institutions, covering the availability of staff, equipments and medicines at these centres; (ii) to find out reasons for patients leaving the hospitals/T. B. Centres in-between treatments; (iii) to find out the various sources from which the patients came to know of the availability of treatment for T. B. at the health institutions; and (iv) to ascertain the weaknesses/bottlenecks of the programme and to suggest remedial measures for making improvement therein. It was a State level survey conducted in selected Districts. The broad subject heads on which the information was collected were the details of infrastructural facilities, requirement and availability of medicines, equipments and other materials, staff position, treatment given to patients and investigations carried out, and expenditure incurred in running the centre. The data were collected with reference to the financial year 1991-92 and on the date of survey. In the case of data collected through secondary sources, the reference period was the years 1989-90 to 1991-92.

Sampling design

16.2 A multi-stage sampling design was adopted wherein at the first stage, four District T.B. Centres in the State which had the maximum number of cases for detection of T.B. were selected. At the second stage, subject to the availability of community centres and primary health centres in each selected District, two community centres and four primary health centres were selected. At the third stage, from the operational area of the sampled community health centres and primary health centres selected at the second stage, a maximum of five patients currently undergo-

ing treatment and five patients who left the centres during treatment were selected. With a view to seeking opinion of multipurpose health workers, two multipurpose health workers were selected from each sampled community health centre and primary health centre. The total sample size thus selected consisted of four District T.B. Centres, eight Community Centres and 15 Primary Health Centres, 44 multi-purpose health workers, 101 patients undergoing treatment and 88 ex-patients.

Field work

16.3 The field work was done during November-December, 1992 by spending about 75 mandays in the field. Data were collected through field enumeration method by seeking oral information from patients, by going through the establishment records and through discussions with officials of Health Directorate. The data were collected through four types of schedules, namely Schedule A for details about infrastructural facilities and other details of T.B. Centres, Community Centres, Primary Health Centres and patients undergoing treatment, etc; Schedule B for seeking the views of multi-purpose health workers and Schedule C and D for seeking the views of current and ex-patients respectively regarding the treatment/facilities received by them. The primary field workers consisting of one Assistant Research officer, one Statistical Assistant and one Junior Field Investigator, were all regular and full-time employees of the Economic and Statistical Organisation. The supervision was done by the Deputy Economic and Statistical Adviser and one Research Officer, A total of 260 schedules comprising 27 Schedule A, 44 Schedule B, 101 Schedule C and 88 Schedule D were canvassed during the course of survey. On an average, each primary worker was required to canvass one Schedule A, five Schedule B, C and D. It took about six hours for filling up Schedule A, and 1½ hours each for Schedules B, C & D. The field workers faced some difficulties in collecting information

due to poor record keeping by basic functionaries in the rural areas, in the location of respondents and their inability to spare time for interviews and the hesitating nature of patients in divulging the information regarding T.B. disease.

Data processing

16.4 All the 260 schedules were processed by a team consisting of one Research Officer, one Assistant Re-

search Officer and one Statistical Assistant. The tabulation was done manually by the same team with additional assistance of one Junior Field Investigator. With a view to maintaining the accuracy of data tabulated, internal checks were also carried out. The first set of tables were ready by February, 1993, and the final report entitled 'Evaluation Study of T.B. Control Programme in Haryana' was still awaiting the approval of the State Government.

POPULATION RESEARCH CENTRE PATNA UNIVERSITY, PATNA

17. Promotion of Family Planning and Maternal and Child Health (MCH) Care through Dairy Co-operatives in Rural Bihar—Baseline Survey

Introduction

17.1 This was an *ad hoc* survey conducted by the Population Research Centre, Patna University, Patna, at the instance of the Population Council, New York. The main objectives of the survey were (i) to generate reliable baseline data on levels of use of contraception and other MCH services for the intervention area and frequency and quality of contact with agencies providing health and family welfare services, and (ii) to make an assessment of facilities and quality of health and family welfare services provided both by the public and private sources in the intervention area. The survey was conducted in Samastipur District of Bihar. Only the rural areas of the District was covered. The broad subject heads on which the information was collected were (i) the socio-economic profile of the population, (ii) knowledge, attitude and practice of family planning, and (iii) quality of family planning services.

Sampling design

17.2 In the District, 61 villages where family planning activities were going on through Dairy Co-operative Societies were purposively selected at the first stage. The list of households in the selected villages served as the sampling frame for second stage sampling unit. The allocation of the size of households to be selected was in proportion to the population of the village. The sample households thus decided were selected following systematic sampling technique. All the eligible women in the households defined as 'currently married woman' (in the age group of 15—49) were interviewed for eliciting detailed information. The total sample size thus selected consisted of 61 villages, 2,463 households and 2,329 eligible women.

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Field work

17.3 The field work was started on 7th July, 1992, and completed by 13th September, 1992, by spending about 690 mandays in the field. Data were collected through field enumeration method by seeking oral information from respondents. The field work was done by ten female interviewers deployed on a temporary and *ad hoc* basis under the supervision of two regular staff of the Population Research Centre. Before the start of the survey, in-depth training for 14 days was imparted to the supervisors and the field staff. During the course of field work, regular supervision and spot checks were conducted by the senior staff of the Population Research Centre. Three types of schedules were used for eliciting detailed information, namely : (a) couple schedule, (b) village schedule and (c) PHC schedule. On an average, each interviewer was required to canvass six schedules per day. It took about one hour to fill in a schedule. A total of 2,463 household schedules and 2,329 eligible couple schedules were canvassed during the course of survey.

Data processing

17.4 Pre-tabulation processing of data collected through the three types of schedules was done by ten persons each engaged on scrutiny, editing and coding and four persons were engaged in analysis of data. The tabulation of the data collected was done with the help of computer at the Central Office, Baroda. The preliminary draft report had been completed in the month of June 1993 and till the time the survey was reported, the release of final report was awaited.

**GOKHALE INSTITUTE OF POLITICS AND
ECONOMICS, PUNE**

18. Current Evaluation of Family Planning and Maternal and Child Health Care Programme in Rural Areas of Sindhudurg District, 1992

Introduction

18.1 The survey was sponsored by the Ministry of Health and Family Welfare, New Delhi, and conducted by the Population Research Centre, Gokhale Institute of Politics and Economics, Pune, on *ad hoc* basis. The main objectives of the survey were : (i) to evaluate the functioning of the family planning and Maternal & Child Health (MCH) Care programme in the rural areas of Sindhudurg District; (ii) to examine the characteristics of the acceptors and non-acceptors; (iii) to estimate the impact of family planning performance on the birth-rate; and (iv) to study the pattern of out-migration, which is a special feature of the District. The survey covered the rural areas of Sindhudurg District. The broad subject heads on which the information was collected were the various family planning and MCH Care programmes and their assessment, details on characteristics of the acceptors of family planning programmes and the impact of family planning on birth rate. In addition, detailed information was also collected on the pattern of out-migration.

Sampling design

18.2 A three-stage sampling design was adopted for the conduct of the survey where tehsils, Primary Health Centres and villages formed the sampling units at the three stages. From amongst the list of tehsils, four tehsils were selected at the first stage with probability proportion to size. At the second stage,

from each sampled tehsil, the oldest Primary Health Centre was selected purposively. At the third stage, from each Primary Health Centre, two villages arranged in the order of distance from the Primary Health Centre were selected systematically. In certain cases, adjustment in selection of villages had to be made in order to net at least 50 sterilisation cases from one PHC. In the selected villages of each PHC, all the households were interviewed for collection of detailed information on the various aspects of family planning and MCH Care programme. Finally, 2,100 households were interviewed during the course of the entire survey.

Field work

18.3 The field work was started in the month of May, 1992, and completed by the end of April, 1993 by spending about 16 man-months in the field. Data were collected through field enumeration method by seeking oral information from respondents and by going through the records of the Primary Health Centres. In all, four Field Investigators conducted the field work under the supervision of one senior level official. Both the supervisory and the primary field workers were imparted necessary training before their deployment in the field. Data were collected through five types of schedules. As a work-load norm, each Field Investigator was required to interview six households per day.

Data processing

18.4 The schedules in respect of all the 2,100 households were in pre-tabulation processing stage when the survey was reported.

**POPULATION RESEARCH CENTRE
FACULTY OF SCIENCE, VADODARA**

19. Determinants of Infant Mortality in Gujarat and Maharashtra—A Perspective Study

Introduction

19.1 This was an *ad hoc* survey conducted by the Population Research Centre, Faculty of Science, Vadodara, at the instance of International Development Research Centre, Canada. The main objectives of the survey were to (i) determine the causes of infant deaths based on lay reporting and to quantify the extent of each cause separately during neo-natal and post-natal periods; (ii) identify various demogra-

phic, socio-economic, cultural, environmental, nutritional and health factors associated with infant mortality at the individual, household and community levels; and (iii) understand how these variables operate through certain proximate variables to influence infant mortality. The survey was conducted in selected Districts of the States of Gujarat and Maharashtra. The estimates on the basis of the survey were to be made available at the State level. The broad subject heads on which the information was collected were pregnancy record including infant survival status, details of household and of couples under the

target group and other details of villages covered under the survey. Schedules for the survey were pretested in 25 households each in Gujarat and Maharashtra and necessary modifications were made. The data were collected with reference to a period of 27 months beginning from November, 1992.

Sampling design

19.2 A two-stage simple random sampling technique was adopted for the study, and the Districts and the villages where Primary Health Centres were located, were the sampling units at the two stages respectively.

From each State, one district from each of the geographical divisions were selected at the first stage. Thus, in Gujarat, Bhavnagar from Saurashtra, Sabarkantha from North Gujarat and Surat from South Gujarat were selected. In Maharashtra, similarly, Nasik from Bombay, Pune from Pune, Aurangabad from Aurangabad and Akola from Nagpur regions were selected. At the second stage, from each of these selected districts, ten villages, where Primary Health Centre was located, were selected randomly to enumerate the pregnant women in the last trimester during the reference period of 27 months beginning from November, 1992. The survey was expected to cover about 3,900 and 3,600 households in Gujarat and Maharashtra respectively wherein births resulting from the reference period pregnancies had taken place.

Field work

19.3 The field work was started on 1st November, 1992, and was still in progress when the survey was reported. The data were being collected through field enumeration method by seeking oral information from respondents, focus group discussions and anthropometric measurements. Data were collected by three Investigators in Gujarat and four Investigators in Maharashtra. In each State, one Supervisor was appointed to supervise the field work done by the field Investigators. In addition, four Research Officers and two Principal Investigators from the Population Research Centre were also associated with the field work. The Field Investigators were given necessary training by the Research Officers to conduct household level survey for collecting information on the couple questionnaire by contacting each woman who had given live birth, resulting from the reference period pregnancies enumerated by the Auxiliary Nurses-Midwives (ANMs) in the selected study areas of the two States. The supervisors were expected to conduct cent per cent checking of the filled in schedules. To ensure quality of data, the Principal Investigators of the Research Centre stayed with the field staff in the initial period in each of the seven Districts.

The Research Officers stayed with the team throughout the period of the first round data collection by which time the teams were fully trained and the quality of data collected was found to be very satisfactory. Both the Principal Investigators and Research Officers also made periodic visits when the team was in the field to ensure smooth functioning and to solve problems which the supervisors could not have solved. Simultaneously, periodic meetings with the Primary Health Centre staff in the presence of the District Health Officers in each of the seven Districts by the Principal Investigators and the Research Officers were held to ensure completeness of data and to resolve problems faced by the ANMs and their supervisors in carrying out the project activities as well as to clarify doubts. Data were collected through four types of schedules, namely : (a) pregnancy record, (b) infant survival status record, (c) household and couple schedule, and (d) village schedule. On an average, each Field Investigator was supposed to canvass five household and couple schedules per day and to check the records maintained by the ANMs. Approximately 20 minutes were taken to fill up a schedule by each Investigator.

The training of the Primary Health Centre staff could not be carried out within the stipulated time frame because of the non-availability of the State Coordinator and concerned District Health Officers. As a result, the initiation of data collection by the ANMs, registration of women in the third trimester of pregnancy and recording of details of ante-natal care availed was delayed by one to two months. In addition, the complete enumeration of pregnant women in the third trimester in the initial stages could not be carried out by the ANMs because of several other reasons. Firstly, the ANMs found it difficult to identify women in the third trimester of pregnancy for collecting ante-natal care information and by the time they could contact them, some of the women in the last month of gestation had already delivered. These women could not be included for follow-up, under the study because their ante-natal care information was missing. Further it was noticed in many cases that the ANMs had not taken some or all of the anthropometric measurements of 7 to 9 months pregnant women or had not estimated the Hb level at the stipulated time. These cases were also dropped from the study. In view of the above problems, the Research Centre found it difficult to meet the expected number of live births resulting from the designated one year reference period pregnancy as well as expected number of infant deaths during the follow up period. To overcome this situation, the Centre was contemplating to extend the reference period of enumerating the pregnant women by about 2 to 3 months time.

**CENTRAL STATISTICAL ORGANISATION
MINISTRY OF PLANNING AND PROGRAMME
IMPLEMENTATION, NEW DELHI**

20. Enterprise Survey (Mining & Quarrying and Storage & Warehousing)—1992-93

Introduction

20.1 The Central Statistical Organisation has been conducting the Economic Census and follow up surveys for collection of relevant data needed to fill up vital data gaps in the unorganised segments of non-agricultural sector of the economy since late seventies. The 1992-93 Enterprise Survey was conducted by the CSO covering activities mainly classified under 'mining & quarry' and 'storage & warehousing' as the last round of the current series of the follow up surveys. While the survey on 'storage & warehousing' was covered for the third time since it was covered last in 1983-84 along with other sectors, that for 'mining & quarrying' was covered for the first time since the start of the programme. As in other years, the present survey also envisaged collection of detailed information on employment, emoluments, expenditure, receipt, inventory of assets, outstanding loans, input, output, etc., in respect of all enterprises, selected on the basis of objective sampling design, from the enterprises engaged in activities primarily classified under these sectors. The programme of integrating the two unrelated sectors as the topics of enquiries in this round was mainly with a view to completing the third series of the follow up surveys. This was also done with a view to net adequate number of sample enterprises belonging to these two sectors since the sample enterprises in respect of these sectors netted through broad based enterprise enquiries of earlier rounds was not considered adequate to give reliable estimates at State level.

The activity of 'mining & quarrying' covers underground and surface mines, quarries, wells and includes extractions of minerals and also all the supplemental activities such as dressing and beneficiation of ores and other crude materials, like crushing, screening, washing, cleaning, grading, milling, flotation, melting, pelletising, topping and other preparations carried out at the mine site, which are needed to render the materials marketable.

The activities under 'mining & quarrying' have an important bearing in the economy by way of producing and providing initial inputs and raw materials for processing in the secondary sector. Though the number of enterprises engaged in this sector is not sizeable and the contribution of this sector to the national

income is only about 2.5 per cent, it was taken up for survey because of its importance as basic industry. Whereas data in respect of 'major minerals' constituting the so-called 'organised' segment in this sector are available through statutory returns, those in respect of the 'minor minerals' are inadequate and scanty. The scope of the present enquiry was thus limited to 'minor minerals' only. The present survey proposes to cover only those enterprises which were engaged in mining/extraction activities pertaining to the 'minor minerals' as declared by the Central Government under Section 3(e) of the Mine and Minerals (Regulation and Development) Act, 1957. All those enterprises under private or cooperative category engaged in extraction and distribution of 'minor minerals' and in services rendered to make the minerals marketable, trading and consumption were covered under the present survey. Enterprises run/owned by Central and State Governments, corporations/undertakings, etc., and all enterprises registered under the Factory Act, 1948, under Section 2m(i) and 2m(ii) and covered under the Annual Survey of Industries were excluded from the present survey.

The activities under 'storage & warehousing' were : (i) warehousing (NIC-740), (ii) cold storage (NIC-741), and (iii) rest of storages (NIC-749). Enterprises engaged in providing storage & warehousing facilities in respect of grains, oilseeds, other agricultural commodities like cotton, tobacco, jute, etc., other food articles and providing refrigeration facilities for potato, fruits, dairy products, etc., on hire/rental services and facilities for storing all manufacturing products belonging to private sector including cooperatives were covered. However, farm products stored by the owner of the farm in his own godown or a manufacturer storing his commodities in his own godown or warehouse was excluded from the scope of this survey. 'Storage & warehousing' on hire to the farm producer, dealer, trader, processor and manufacturing enterprises (including general public) were included. Enterprises managed by the public sector and the Government, like Central and State Warehousing Corporations, and such warehousing facilities provided by marketing societies, statutory bodies, were outside the purview of the survey. The scope of the survey was thus restricted to all the storage & warehousing enterprises under private and cooperative ownership without any restriction on size of employment. However, lockers in commercial banks and in other types of enterprises for safe sto-

rage of precious articles were excluded. Storage facilities offered by drycleaning and laundering enterprises were excluded. However, the storage & warehousing run by local bodies were to be included as a special case, especially the community grain golas/dharma golas maintained/run by the village panchayat/cooperatives.

A survey in this sector was taken up first in the present programme during 34th round of NSS (July, 1979—June, 1980) covering non-directory establishments (NDE) and own-account enterprises (OAE) while the CSO was entrusted with the survey covering the directory establishments (DE). The results in respect of NDE and OAE parts were brought out by the NSSO but those in respect of DE were not released due to inadequate sample size. Thereafter, the results of the enterprise survey 1983-84, conducted by CSO covering all the parts of DE, NDE and OAE of the unorganised activities under 'storage & warehousing' were brought out. During this survey, it was proposed to maintain the same scope and coverage of this sector as in the last 1983-84 enterprise survey covering all the three parts, i.e., DEs, NDEs and OAEs, engaged primarily in the activity of storage & warehousing.

The mining activity is carried on along with other activities as pre- or post-mining activities or any other activity. In such cases, the activity pertaining to mining would be covered as enterprise irrespective of whether this forms a major or minor source of income. All the relevant particulars of this activity alone were to be collected.

Similarly, the activities under storage & warehousing were undertaken as a mixed activity by an enterprise along with substantive or auxiliary activities in respect of trade, manufacture or transport. In all such cases of mixed activities pursued by the sample enterprise, the relevant particulars about the activity of storage & warehousing only were to be collected.

The survey envisaged to collect detailed information on major characteristics of enterprises involved mainly in 'mining & quarrying' or in 'storage & warehousing', like emoluments, receipts and expenditure, inventory of fixed assets, outstanding loan, details of various inputs, etc. The scope of the survey covered both 'own-account enterprises' and 'establishments' available in these segments. The survey covered the whole of Indian Union, except (i) Ladakh & Kargil Districts of Jammu & Kashmir, (ii) 768 interior villages of Nagaland located beyond five kilometres from the bus route, and (iii) 172 villages in Andaman & Nicobar Islands which lie inaccessible throughout the year.

The survey was of one year duration, commencing on 1st October, 1992, and ending on 30th September, 1993, spread over four sub-rounds, each of three months duration.

Data on average employment; salaries, wage, allowances, etc.; input consumed; and output of minor minerals were collected with reference to last accounting year and last month by the enterprises maintaining books of account. In respect of enterprises not maintaining books of account, data were collected with reference to last 365 days/last 30 days preceding the date of survey. For fixed assets and outstanding loan data were collected with reference to last accounting year/last 365 days.

Sampling design

20.2 The frames for selection of the sampling units consisted of (i) 1991 census villages in rural areas in which latest economic census 1990 was done, (ii) list of Enumeration Blocks (EBs) formed in urban areas during Economic Census 1990, (iii) list of EBs formed during 1980 Economic Census for urban areas, (iv) Urban Frame Survey (UFS) Blocks which were updated in 1987-88 in 64 towns in case Economic Census was not conducted and/or results were not available, and (v) list of Economic Wards in all other towns.

The sample size for mining & quarrying and storage & warehousing at the all-India level was decided keeping in view the manpower resources available for the field work, the number of enterprises engaged in the two sectors and the adequacy of requirements of a sample size for having dependable estimates of various characteristics.

It was observed that eight States, namely Andhra Pradesh, Bihar, Madhya Pradesh, Maharashtra, Haryana, Rajasthan, Tamil Nadu and Uttar Pradesh, contributed more than 90 per cent of the total production of minor minerals in the country. The remaining 24 States/UTs contributed less than ten per cent of the total production.

In view of this, Districts were categorised into two groups, namely 'minor minerals concentration' (MMC), Districts and 'non-minor minerals concentration' (NMMC) Districts. The Districts were treated as basic strata for sample selection. In case of mining & quarrying activities, a dual approach was adopted, namely (i) preparation of a list of licences issued by various State Departments/Statutory bodies/local bodies and using it as a frame for selecting the required number of licences, and (ii) capturing the activity using area sampling and then selecting the enterprises engaged.

In case of storage & warehousing, only the area sampling approach was adopted in all the Districts.

For each of the eight States mentioned above, only a set of five principal minor minerals (which may vary from State to State) were specified based on their importance in terms of total production during 1989-90/1990-91 depending upon the availability of data. Districts which accounted for about 90 per cent of the total production in a State in each of the five principal minor minerals, when arranged in descending order of their contribution were classified as MMC Districts. The Districts other than MMC in a State were treated as Non-MMC Districts. In case of other States and UTs, those Districts whose minor mineral production was more than 1½ times of the average minor mineral production in a District of the State, were considered as MMC Districts. If none satisfied the above criteria, then the first two Districts, which contributed most to the minor minerals production, were treated as MMC Districts and the remaining were treated as Non-MMC Districts. Thus, there were at least two Districts in each State marked as MMC Districts.

The sample size for the survey on mining & quarrying at all-India level was allocated to the sets of respective States/UTs in proportion to their respective shares of total minor minerals production. Similarly, the sample size was further allocated to various Districts for each category (MMC and Non-MMC) in proportion to its contribution to the total minor minerals production, keeping in view the minimum number of sample of each sub-stratum (one for each five principal minor minerals and one for the rest of minor minerals), workload under 'storage & warehousing' schedule and the requirement of minimum number of licences to be canvassed.

Sample selection in MMC Districts

Each of the MMC District was treated as an independent stratum. Each such stratum was further subdivided into six sub-strata. In each of these Districts, the list of licences issued and in operation during the last one year for each sub-stratum were taken as a frame and a pre-assigned number of samples (enterprise) was selected using circular systematic sampling technique.

In case of storage & warehousing, area-sampling technique was adopted and a District which was taken as a stratum was subdivided into two sub-strata, namely Stratum-1 consisting of all villages in case of rural area, enumeration blocks/UFS blocks in case of urban area having at least one enterprise engaged in

storage & warehousing, and Stratum-2 consisting of all other villages/EBs/UFS blocks which did not contain any enterprise engaged in storage & warehousing. The first stage units in the sub-stratum-1 were selected following probability proportional to size, size being the number of enterprises available and engaged in storage & warehousing. In sub-stratum-2, the first stage units were selected following simple random sampling with replacement. All enterprises available in these first stage units were covered for the survey.

Sample selection in Non-MMC Districts

In Non-MMC Districts, a District or group of Districts constituted a stratum. Each stratum was further subdivided into three sub-strata in both rural and urban areas separately, namely sub-stratum-1 consisting of all those villages/EBs/UFS blocks having at least one enterprise in mining & quarrying, sub-stratum-2 consisting of all those villages/EBs/UFS blocks having no enterprise engaged in mining & quarrying but containing at least one enterprise engaged in storage & warehousing, and sub-stratum-3 consisting of all other villages/EB/UFS blocks. A pre-assigned number of FSUs were selected using probability proportional to size sampling, size being the number of enterprises in the sub-stratum 1 & 2. In the sub-stratum-3, a simple random sampling was followed for selection of first stage units. Thereafter, all the enterprises available in the FSUs were covered for the survey.

The total sample size in MMC Districts consisted of 16,000 sample enterprises and in case of Non-MMC Districts, first stage units consisted of 7,020 samples. In all about 16,000 enterprises engaged in mining activity and about 15,000 enterprises engaged in storage & warehousing were expected to be covered during the course of survey.

Field work

20.3 The survey was started on 1st October, 1992, and was completed by the end of September 1993. The data were collected through field enumeration method by seeking oral information from respondents and by going through office records. Four types of schedules were canvassed for collection of data on various aspects, namely : (i) Sch. 0.01 for listing all enterprises (mining & quarrying and storage & warehousing), (ii) Sch. 0.02 for listing all enterprises engaged in mining & quarrying only in MMC Districts, (iii) Sch. 2.6 for mining & quarrying 1992-93 (minor minerals), and (iv) Sch. 2.34 for storage & warehousing 1992-93.

The primary field work was conducted by 190 Assistant Superintendents under the supervision of 30 Superintendents of NSSO. Both the primary and supervisory staff were fully trained for the field work. However, they were imparted necessary training for the present survey before their deployment in the field. The Superintendents were required to inspect the work of each Assistant Superintendent once in a month. Assistant Directors of the regions were also required to inspect and supervise the work of each Assistant Superintendent during the survey period. As a workload norm, each Assistant Superintendent was required to cover 37 samples and 84 enterprises during the whole period of the survey. On an average, it took about six hours to fill in a schedule.

21. Annual Survey of Industries (ASI) 1990-91 and 1991-92

21.1 This is a continuous survey being conducted annually by the National Sample Survey Organisation at the instance of the Central Statistical Organisation (CSO) in the Department of Statistics, Ministry of Planning and Programme Implementation, New Delhi. The survey was earlier reported at Sl. No. 20 of 43rd Report, 1992.

In both the surveys, data continued to be collected on capital structure, employment, consumption of fuel and lubricants, raw materials and other inputs and outputs, value added by manufacturing, labour statistics and characteristics of factories/establishments for the CSO; on labour turnover and absenteeism for Labour Bureau, Shimla, under the Ministry of Labour; and on construction of residential accommodations for employees by factories for the National Buildings Organisation.

The sampling design, organisational arrangements and coverage has not been changed during the year under reference. Consequent to the revision effected in the specific industry blocks on the basis of NIC 1987, an exercise for revising the format for reporting material inputs and outputs including providing item codes had been taken up during the year under reference.

DIRECTORATE OF ECONOMICS AND STATISTICS, ORISSA, BHUBANESWAR.

22. Mechanised and Non-Mechanised Transport Study in the Private Sector in Orissa, 1992

Introduction

22.1 The Directorate of Economics and Statistics, Orissa, Bhubaneswar, conducted this *ad hoc* study at

The field staff faced the problems in identifying the selected enumeration blocks because of non-availability of proper details in respect of these EBs from the different concerned authorities. In certain cases, licencees were not the actual operators in the mining enterprises as they had leased out their licencees to several sub-contractors. The non-availability of these sub-contractors at the time of survey also created some problems to the field staff.

Data processing

20.4 The data entry scrutiny is being done by six staff member of CSO. The data entry is being done by the Computer Centre in the Department of Statistics.

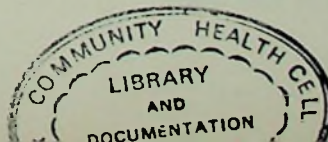
The survey for the ASI 1990-91 was concluded in June, 1992, with an overall completion of 60,841 out of the net allotment of 65,675 factories. The remaining 4,834 factories or 7.4 per cent of the net allotment were treated as non-response cases for various reasons. The completed returns in respect of the factories already covered had been sent to the tabulating agencies.

Field work of ASI 1991-92 was started in July, 1992, and upto the end of December, 1992, 17,865 or 23.5 per cent of the net allotment had been completed. Completed returns in respect of 7,499 factories, i.e., about 42 per cent of the above completed factories, had been despatched to the tabulating agencies.

To meet the growing demands for results expeditiously, a decision to have quick tabulation of key characteristics had been taken up. For this purpose, large output units employing 200 or more workers were considered and the priority tables were generated through personal computers installed at the FOD headquarters. For ASI 1990-91, the work for such quick tabulation was taken up in the month of September, 1992, and completed by December, 1992. The quick tabulation in respect of ASI 1991-92 was in progress when the survey was reported.

the instance of Planning and Coordination Department of the State with the main objective of estimating the value added to the State income from the private mechanised and non-mechanised transport sector. The whole of the State was covered for the survey. The survey covered the transport enterprises engaged

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in carrying passenger and goods from one place to another by means of either mechanised or non-mechanised transport. The enterprises engaged in such activities were divided into Directory Establishments and Non-Directory Establishments. The Directory Establishments for the survey were those which had six or more workers with at least one hired worker. The non-directory, on the other hand, covered those establishments which had less than six workers with at least one hired worker. The enterprises that operated without the help of any hired worker, but exclusively by the household workers were termed as Own-Account Enterprises. The following activities were covered under the survey :

- (a) Passenger transport by bus service (NIC-701);
- (b) Passenger transport by other motor vehicle (NIC-702);
- (c) Freight/goods transport by motor vehicle (NIC-703);
- (d) Transport by hackney carriage, bullock cart, ekka, tanga, etc. (NIC-704);
- (e) Transport by animals, like horses, elephants, mules, camels. (NIC-705);
- (f) Transport by men, including rickshaw pullers, push-cart operators, etc. (NIC-706).

The following activities were, however, excluded from the coverage of the study :

- (i) All public sector vehicles;
- (ii) All non-commercial private cars, jeeps, etc., which are exclusively used for own purposes;
- (iii) Air transport;
- (iv) Railway transport;
- (v) Water transport, inclusive of ocean and coastal water transport (NIC-710) and inland water transport (NIC-711);
- (vi) Goods transport owned and operated by companies/corporations located outside the State;
- (vii) Carriages registered in the State and operating outside the State.

The broad subject heads on which information was collected were the identification particulars of the enterprises, employment particulars of the persons engaged, receipts, inventory of fixed assets exclusively used for the enterprise, expenses incurred, etc. The data were collected with reference to last 30 days and the preceding 365 days from the date of visit by the field worker to the unit in respect of receipts and expenses incurred and with reference to the date of survey in case of inventory of fixed assets.

Sampling design

22.2 For the purpose of this study, the State's 16 regional transport districts were taken as strata for both passenger and goods transport. The entire transportation system was divided into two parts, namely passenger transportation and goods transportation. Each of these sub-divisions were further divided into mechanised and non-mechanised sectors. The mechanised passenger sector covered buses, mini-buses, contract carriages, matador/trekker/standard-20, pick-up vans, taxis and three wheelers. The mechanised goods transportation sector covered trucks, long-trailer carriers, tankers, mini-trucks (0.5 to 3 MT), station wagons and delivery vans, three wheelers carrying goods, and tractor trailers. In the non-mechanised passenger sector, carriages driven by single or more than one animal, rickshaw, carts driven by single or more than one animal were covered. On the other hand, carts driven by single or more than one animal carrying goods, trolleys (cart-type and rickshaw-type) were covered under the category of non-mechanised goods transportation.

A multi-stage sampling design was adopted for the survey. At the first stage, from each stratum, three samples conforming to two single fleet owners and one multiple fleet owner were selected on simple random basis from each category of the mechanised passenger/goods transport. In the case of non-mechanised transport, in the urban sector, three samples available on the spot from each category were covered from one Municipality and one Notified Area Committee (NAC) from each stratum. In case there were more than one Municipality/NAC in a stratum, selection of one Municipality/NAC was done following simple random sampling technique.

In the rural sector, two samples, one each from every category available on the spot, were covered in two selected gram panchayats of the 50 per cent of blocks selected for the purpose. Both the gram panchayats and the 50 per cent of the blocks were also selected following simple random sampling technique.

The total sample size thus selected consisted of 389 samples in the mechanised transport and 821 samples in the non-mechanised transport sector.

Field work

22.3 The field work was started on 9th August, 1992, and completed on 25th November, 1992, by spending 2,025 mandays in the field. Data were collected through field enumeration method by seeking oral information from respondents and by going through the records maintained by the establishments. The field

work was done by 20 primary data collectors under the supervision of seven supervisory staff of the Directorate. In addition, all District Statistical Officers, Deputy Directors of Ranges and two Assistant Directors from the Ad Hoc Survey Section of the Directorate of Economics and Statistics headquarters were also entrusted with the work of inspection and supervision of the survey work. The field workers were given necessary training before their deployment in the field. The data were collected through a single type of schedule. A total number of 1,210 schedules were canvassed during the course of the survey. On an average, each investigator was required to canvass two schedules per day. About four hours were spent for canvassing a schedule in respect of one enterprise.

The field workers faced difficulty in collection of data as most of the owners of the selected establishments were reluctant to part with relevant information for the schedules.

Data processing

22.4 Ten persons were engaged on pre-tabulation processing of data collected through 1,210 schedules canvassed during the course of field investigations. About 500 mandays were spent at the central office on pre-tabulation processing of data. The tabulation was being done manually and with the help of facit and electronic calculators, when the survey was reported. The first set of tables were expected to be produced by the end of August, 1993.

BUREAU OF APPLIED ECONOMICS AND STATISTICS WEST BENGAL, CALCUTTA

23. Survey of Earners by Specified Industrial Activity-1991-92

Introduction

23.1 This *ad hoc* survey was conducted by the Bureau of Applied Economics and Statistics, West Bengal, Calcutta, with the main objective of assessing the extent of contribution to the State income by the wage earners in different sectors of industrial activities and occupations. The survey was conducted at State level covering both rural and urban areas. The data were collected with reference to the date of survey in respect of size of household and number of earners in the household and with reference to one year preceding the date of survey for income of earners by specified industrial activity.

Sampling design

23.2 A stratified two-stage sampling design was adopted. In the rural areas of the State, eight strata were formed on the basis of size class of population as per 1971 Census. In the urban areas, seven such strata were formed comprising five strata obtained on the basis of size class of population as per 1981 Census and one stratum each for Calcutta and Howrah. In the case of urban areas, the first-stage sample units were NSS blocks and in the case of rural areas, mauzas formed the first-stage units. In the rural areas, the number of mauzas to be selected from different strata was based on proportional allocation of mauzas in each stratum. In the case of urban areas, a fixed percentage of first-stage units were selected from each stratum. The first-stage units in both rural

and urban areas were selected at random without replacement in the form of two inter-penetrating subsamples within each stratum. All the earners and all the households in each first-stage units were completely enumerated and their principal and subsidiary industries and occupations recorded. The main industries group for selection of earners at the second-stage was, however, restricted to principal/subsidiary activities in certain specified industry groups, namely: (i) educational services; (ii) research and scientific services; (iii) medical and health services; (iv) business services, like catering, advertising, decorating etc.; (v) legal services; (vi) recreational and entertainment services; (vii) personal services; and (viii) repair services. Ten per cent of earners, subject to a minimum of two, were selected linear systematically within each specified industry group within each first-stage sample unit. The total number of first-stage units in the rural and urban areas respectively were 442 and 238.

Field work

23.3 The field work was started in January, 1991, and at the time of reporting the survey, whereas the work in the rural sector had been completed, that for urban areas was still in progress. Data were collected through field enumeration method by going through office records and by seeking oral information from respondents. Two hundred and fifty primary field staff conducted the field work under the supervision of 38 inspecting staff and 17 supervisors under the overall charge of the respective

District Statistical Officers and Divisional Assistant Directors. The field staff, both primary and supervisory, were regular, full-time and well experienced in conducting such surveys from time to time. However, necessary training and feed-back were provided to them as and when required. Spot and post-enumeration checks were conducted for ensuring

quality of data collected. Data were collected through two sets of schedules—one used for listing and the other for the detailed survey. On an average, each field worker was to list out 60 specified earners and canvass two detailed schedules per day. It took about three hours to canvass detailed schedules for one sample unit.

RESERVE BANK OF INDIA BOMBAY

24. Survey of Foreign Currency Non-Resident (FCNR) and Non-Resident External Rupee (NRER) Accounts—July, 1988 to June, 1991

24.1 This survey was conducted on *ad hoc* basis by the Department of Statistical Analysis and Computer Services, Reserve Bank of India, Bombay, with the main objective of generating estimates of (i) deposit amounts, (ii) payments of interest and principal amounts, (iii) balances outstanding, (iv) deposit amounts pledged as security for bank advances, etc., and (v) repayment obligations arising from repatriation of balances in respect of Foreign Currency Non-Resident, (FCNR) and Non-Resident External Rupee (NRER) fixed deposit accounts opened during the period July, 1988 to June, 1991. The broad size subject heads under which the informa-

tion was collected, reference period, sampling design, etc., and the arrangement for data collection, had already been discussed in detail at Sl. No. 21 in the 43rd Annual Report under this series.

During the course of the survey, started in the month of November, 1991, about 2,365 schedules were canvassed. The data collected through these schedules were processed by ten staff members at the central office of the Reserve Bank of India by spending about 2,000 mandays. The data were tabulated on the main frame computer of the RBI and the job was completed by spending about 600 mandays at the central office. The first set of tables were ready by July, 1993, and final report was likely to be published by the end of December, 1993.

LABOUR BUREAU MINISTRY OF LABOUR SHIMLA

25. Survey of Working and Living conditions of Workers Engaged in Toys and Dolls Industry in India

Introduction

25.1 Labour Bureau, Shimla, conducted this survey on an *ad hoc* basis. The main objective of the survey was to study the working and living conditions of workers engaged in toys and dolls industry in India. The survey was conducted in major centres of concentration of this industry, namely, Bombay, Madras, Bangalore, Delhi and Calcutta. The broad subject heads under which information was collected were employment, earnings, wage rates, hours of work, leave and holidays, welfare facilities, social security, health and safety and industrial relations

for studying the working conditions, and demographic characteristics of the workers, family income and receipts, qualitative standard of living, housing conditions and indebtedness for studying the living conditions of the labourers. The data were collected with reference to last month preceding the date of survey for employment, earnings, family income, qualitative standard of living, and with reference to the date of survey for hours of work, welfare facilities, housing conditions, household assets and indebtedness.

Sampling design

25.2 A two-stage sampling design was used where the first-stage units consisted of establishments and the workers working in these establishments as the

second-stage units. The frame for selection of sampling units was very old and un-updated in view of the fact that the units under this industry were in the unorganised sector. However, the frame was updated by the staff of the Labour Bureau with the help of various Departments in the States. The sample size, both for the first-stage and the second-stage units, were fixed keeping in view the resource constraints. First-stage units were selected following systematic random sampling and the second-stage units were selected from each first-stage sample units following simple random sampling technique without replacement. The total sample size thus selected consisted of 177 first-stage units and 192 second-stage units.

Field work

25.3 Field work started on 5 February, 1992, and was completed on 8 March, 1992, by spending 286 mandays in the field. Data were collected through field enumeration method by seeking oral information from respondents, by visual observations, by going through establishment records and by direct measurements. Ten investigators at the junior level were deployed for field work under the supervision of one Investigator at senior level. Both the primary workers and the supervisor were regular and experienced staff of the Labour Bureau. However, necessary training was also imparted to them before

the start of the survey. Assistant Director in-charge of the survey also supervised the field work. Filled-in schedules were scrutinised and necessary rectifications made by the supervisory officer in the field itself. As a workload norm, each Investigator was required to conduct one interview with employer for recording the data on schedule-I meant for information relating to the working conditions, and canvass one schedule-II for eliciting information from selected workers for collecting data on living conditions of the workers. On an average, three hours were spent to fill in a schedule. The extent of non-response in the industry was very high due to incomplete and old addresses of the industrial units, due to change in the line of production, and closure of units in certain cases. However, substitution in such cases was done to complete the sample size. In certain cases, the field staff also faced non-response from management as also from workers. However, such problems were resolved with the help of various Government Departments.

Data processing

25.4 All the 177 unit level schedules and 192 worker schedules were processed by ten members of the staff at the headquarters of the Bureau by spending about 225 mandays. The tabulation of data was still in progress when the survey was reported.

26. Socio-Economic Conditions of Scheduled Tribe Workers Employed in Industrial Establishments in Urban Areas of Nagpur

Introduction

26.1 Labour Bureau has been conducting *ad-hoc* surveys under this series. The last one conducted for urban areas of Baidadila in Madhya Pradesh has been presented at Sl. No. 24 of the 43rd Report. The present survey was conducted in industrial establishments in the urban areas of Nagpur. Main objective of the survey was to collect comprehensive data on important socio-economic characteristics of the Scheduled Tribe workers which could be helpful in formulating realistic programmes and policies to help improve the plight of such workers. The city municipal limits of Nagpur town in Maharashtra formed the geographical area for the coverage of the survey. The broad subject heads under which the information was collected were employment, wages and earnings, working conditions, welfare amenities, social security, industrial relations, etc., to study the working conditions of workers and on family and family characteristics, qualitative standard of living and dietary habits, assets and income, indebtedness,

housing conditions, forced labours, awareness of welfare schemes, migration, sickness and attitude towards social customs and beliefs for studying the living conditions of workers. In addition, specific information having direct bearing on the living conditions in the localities predominantly inhabited by Scheduled Tribe workers were also collected on aspects like location of inhabitants, environment and surroundings, types of houses, conditions of roads, lanes, drains, lighting system, public conveniences, sources of drinking water, transport facilities, medical care, social, cultural, educational and other amenities/services, etc. Data were collected with reference to 31st March, 1992, for employment, preceding calendar month from the date of survey for income and consumption pattern, preceding calendar year from the date of survey for leave and holidays, maternity benefits, sickness, etc., and as on the date of survey for demographic particulars, social security, household goods possessed, indebtedness, migration, employment status, etc.

Sampling design

26.2 Sampling frame was not readily available and had to be prepared with the help of various

sources, like Chief Inspector of Factories, Inspector of Shops and Commercial Establishments, etc. In certain cases, reliance had to be placed on the version of the management. A two-stage simple random sampling technique was adopted and establishments and workers were the sampling units at the two stages. Out of the total of 154 units employing Scheduled Tribe workers, 70 units accounting for roughly about 45 per cent Scheduled Tribe workers, were selected at the first stage. At the second stage, from a total of 2,941 workers in these units, a total of 270 workers, accounting for about nine per cent, were selected at the second stage.

Field work

26.3 Field work was conducted during 13th April-5th May, 1992, by spending 264 mandays (including preliminary work done during 25 Nov. to 13 Dec. 91) in the field. Data were collected through field enumeration method by seeking oral information from respondents and by going through office records. Two types of questionnaires, namely (i) unit level questionnaire for eliciting information from employers on working conditions, and (ii) worker level questionnaire for eliciting information from respondents and for recording information through visual observations, were used for the survey. In addition, locality/area questionnaire was canvassed for seeking the views of important persons in the locality. The field work was done by five Investigators at junior level under the supervision of one Investigator at senior level. The supervisory as well as primary field workers were the regular and full-time employees of the Bureau and were well versed in such types of surveys. However, necessary theoretical training at the

headquarters and practical training in the field was also imparted to them before the start of the field work. The Investigator at senior level conducted hundred per cent checking of the filled-in schedules. In addition, post-enumeration checks were also done to ensure the correctness of the data collected. In all 70 unit-level questionnaires, 270 worker-level questionnaires and two locality/area questionnaires were canvassed during the course of survey. On an average, each field worker was to canvass one unit-level questionnaire, about 2-3 worker-level questionnaires and one area/locality level questionnaire per day. The field workers faced the problems of eliciting information due to reluctance of the informants to come out with information on some sensitive items, like income, consumption of liquor, indebtedness, etc. In certain cases, language problem was also faced by the field workers.

Data processing and Report

26.4 All the 342 questionnaires canvassed during the course of survey were put to pre-tabulation processing which was completed by spending about 20 mandays in the field and 100 mandays in the central office. The pre-tabulation processing was done by 13 regular members of the staff of the Labour Bureau. The tabulation of data was done manually and with the help of electronic desk calculators. It took about 80 machine hours and 400 mandays to complete the tabulation work. In addition, to ensure correctness of data tabulations, cent per cent checking was resorted to at every stage. The first set of tables were ready in October, 1992, and the Report was expected to be published in October, 1993. The survey was to cost roughly about Rs. 7.2 lakhs.

27. Occupational Wage Survey (Fifth Round)

27.1 Labour Bureau, Shimla, has been conducting the occupational wage survey periodically, since 1958, to collect data for construction of wage rates index numbers and for analysis of intra-industry differentials in pay-roll earnings. The last round (Fourth) of the survey was started during 1985, as a Seventh Plan scheme and was covered in five phases. During this round, 53 industries were covered. These comprised 45 industries from manufacturing sector, 5 from mining sector, and 3 from plantation sector. The details in respect of this were given at Sl. No. 19 in the 42nd and at Sl. No. 23 in the 43rd reports under this series.

During the year under reference, after completing the fifth and final phase of the fourth round, Labour Bureau started the Fifth Round of the survey follo-

wing the same survey methodology as adopted in earlier surveys. During this round, Labour Bureau proposes to cover 57 industries which would account for about 51 per cent of the manufacturing sector, 82 per cent of the mining sector and 95 per cent of the plantation sector. Out of the 57 industries, 41 industries will be those which were covered in all the previous rounds, 4 covered for the first-time during the Third Round, 7 in the Fourth Round and 1 relating to manufacture of plastic articles which was earlier covered in the Third Round. Four additional industries, which have been added in this round are Railways, public motor transport undertakings, Ports and Docks, and electricity generating and distributing establishments. Out of the four industries, the last one was covered during the First, Second and Third Rounds of the Occupational Wage Survey while the other three are being covered for the first time in the Fifth Round.

**NATIONAL SAMPLE SURVEY ORGANISATION
MINISTRY OF PLANNING AND PROGRAMME
IMPLEMENTATION
NEW DELHI**

28. Survey on Land Holdings & Livestock Holdings, and Debt & Investment—NSS 48th Round

Introduction

28.1 The enquiries on Land Holdings and Livestock Holdings (LHS) and Debt & Investment form the core of the 48th Round programme of the NSSO. The enquiry on land holdings was first taken up in the NSS 8th Round as part of an FAO programme of World Agricultural Census. It was repeated in 16th and 17th Rounds of the NSSO. An All-India Rural Credit Survey, as a forerunner of the All-India Debt & Investment Survey (AIDIS) was conducted by the RBI for the first time in 1951-52 with a view to obtaining information for formulating banking policies regarding the rural credit. The survey on rural debt and investment was again conducted by the RBI in the year 1961-62 for obtaining reliable estimates of debt, borrowings, capital formation, etc. The next survey on the subject was entrusted to the NSSO by the RBI and was integrated with the survey on land holdings conducted in the NSS 26th Round. The NSSO again conducted this survey in 37th Round (1982). The present Round is a repetition of the NSS 37th Round with some modifications made in the sampling design and formats of the survey schedules. The main objectives of this survey were thus (i) to collect information on land holdings and livestock holdings and debt and investment; (ii) to collect information on deeper aspects regarding operation and management of land and livestock holdings, e.g., on their ownership, tenancy relationship, type of farming, resource availability, cropping pattern, etc.; and (iii) to obtain quantitative information on the incidence of indebtedness, capital formation and other indicators on rural/urban economy which would be helpful in developing credit structure in particular and obtaining other allied information required in the field of planning and development.

Besides the core subject, regular annual survey of consumer expenditure and employment and unemployment was also conducted in two sample households from each selected village/block. In addition, rural retail prices were also collected once in every month from 419 old and 600 new villages as a part of the 48th Round survey programme.

The survey covered the whole of Indian Union except (i) Ladhak and Kargil Districts of Jammu &

Kashmir, (ii) 768 interior villages of Nagaland, situated beyond five Kms. of a bus route, out of a total of 1,119 villages, and (iii) 172 villages in Andaman and Nicobar Islands, out of a total of 520 villages, remaining inaccessible throughout the year. A pilot enquiry to estimate the time required to canvass different types of schedules was carried out. The data were collected with different reference periods depending upon the nature of information. Thus, information on ownership of holdings and inventory of livestock and agricultural machinery was collected as on the date of survey; information pertaining to operational holdings were collected with reference to kharif and rabi seasons of the agricultural year 1991-92; information on ownership and exploitation of trees were collected with reference to the date of survey and 365 days preceding the date of survey; with reference to 30 days preceding the date of survey for purchase and consumption of goods and services for domestic consumption, etc., for household consumer expenditure.

Sampling design

28.2 A two-stage stratified sampling design was adopted for the survey with the first stage units (FSUs) as census villages/urban blocks, and second stage units as the households. The list of 1981 Census villages constituted the sampling frame for rural sector in most of the Districts. However, in Assam (where 1981 Census was not conducted) and in a few Districts of other States (where the available list of villages as per 1981 Census was incomplete), 1971 Census frame was used. For urban sector, the list of NSS Urban Frame Survey (UFS) blocks were considered as the sampling frame in most cases. However, 1991 houselisting enumeration blocks (EBs) were considered as the sampling frame in some of the new towns which were declared as urban areas in the 1991 Population Census.

Stratification

For construction of strata, the States were divided into regions by grouping contiguous Districts similar in respect of population density and cropping pattern. In Gujarat, however, some Districts were split for the purpose of region formation considering the location of dry areas and the distribution of tribal population in the State.

In the rural sector, within each region, each District with 1981 Census rural population of less than 1.8 million were treated as separate stratum. Districts with larger population were divided into two or more strata, depending on population, by grouping contiguous tehsils, similar, as far as possible, in respect of rural population density and cropping pattern. In Gujarat, however, in case of Districts extending over more than one region, the part of a District falling in each region constituted a separate stratum, even if the rural population of the District, as a whole was less than 1.8 million. In Assam, the strata formed for the earlier NSS Rounds on the basis of 1971 Census rural population exactly in the above manner, but with cut off point as 1.5 million population were utilised in this Round also.

In the urban sector, strata were formed again within the NSS region, on the basis of 1981 (1991 in some of the new towns) Census population size classes of towns. Each city with population of ten lakhs or more formed separate stratum. Further within each region, different towns were grouped to form three different strata on the basis of the 1981 (1991 in a few cases) Census population.

Allocation of First Stage Units

The total all-India sample of FSUs determined on the basis of investigator strength in different States/UTs and the expected workload per Investigator, was allocated to different States/UTs in proportion to the strength of central field staff in the respective States/UTs. The States/UTs sample size thus obtained was allocated again to its rural and urban sectors considering the relative sizes of the rural and urban population with almost double weightage to the urban sector. Within each sector of a State/UT, respective sample size was reallocated to the different strata in proportion to the stratum population. Allocation were adjusted such that the sample size for a stratum was at least four or a multiple of four for the rural and urban sectors separately. The only exception was Daman & Diu, in which case a minimum of two samples were allocated for the rural sector.

Selection of First Stage Units

The sample villages in the rural areas were selected with probability proportional to population with replacement and in the urban areas sample blocks were selected following simple random sampling technique without replacement. The selection in both sectors was done in the form of two independent sub-samples.

In the rural areas of Arunachal Pradesh, the procedure of cluster sampling was adopted. The field staff were supplied with a list of nucleus villages of each cluster and were required to select the remaining villages of the cluster according to a set procedure

provided to them. The nucleus villages were selected circular systematically with equal probability in the form of two independent sub-samples.

Larger villages and blocks were sub-divided into suitable number of hamlet groups and sub-blocks respectively in the rural and the urban areas having equal population content. Two hamlet groups were selected from large villages whereas only one sub-block was selected from larger blocks. The criterion for deciding the number of hamlet groups to be formed in larger villages was different from that for deciding the number of sub-blocks to be formed in larger blocks.

Selection of households for schedule 18.1 on land and livestock holdings and for 18.2 on debt & investment in rural areas

Two sets of eight and nine sample households were selected respectively for Sch. 18.1 and 18.2 by grouping the households in different sub-strata. For Sch. 18.1, the households of each sample village/selected hamlet group were divided into four land & livestock holdings survey (LHS) sub-strata, by their area of land possessed. Households possessing no land or land less than 0.005 acre formed LHS sub-stratum-1, the remaining households were first arranged in ascending order of area of land possessed by them and then divided into three sub-strata by determining two boundary points (say X and Y) for each village such that the total area of land possessed for each sub-stratum was nearly the same. The households in the size class of land possessed 0.005 to X, X to Y, and Y and above respectively constituted the LHS sub-strata 2, 3 and 4. From each of these sub-stratum, households were selected circular systematically with a random start after arranging the households in each sub-stratum on the basis of the size class of land possessed by them. The sample size for Sch. 18.1 from LHS sub-strata 1, 2, 3, and 4 were respectively 1, 3, 2, and 2.

For Sch. 18.2, the households for each sample village/hamlet group were subdivided into seven All-India Debt & Investment Survey (AIDIS) sub-strata on the joint consideration of 'land possessed and indebtedness status' of the households. Each of the LHS sub-stratum 1 and 2 were divided into "indebted" and "not indebted" groups to form AIDIS sub-strata 1 to 4. AIDIS sub-strata 5 to 7 were formed by first merging LHS sub-strata numbers 3 and 4 and then subdividing the merged group into three size classes, namely (a) indebted to institutional agencies, with or without being indebted to non-institutional agencies, (b) indebted to non-institutional agencies alone, and (c) not indebted. From AIDIS sub-strata 1, 2, 3, 5, and 6, one sample household each was

selected and two households each were selected from sub-strata 4 and 7. From each of the AIDIS sub-strata these samples were selected circular systematically with a random start.

Selection of Households for Sch. 18.1 & 18.2 in Urban Areas

in the urban sector, both the Schedules 18.1 and 18.2 were canvassed in the same set of sample households. Altogether, nine households were selected from seven sub-strata formed by considering the monthly per capita consumer expenditure (MPCE)

and the indebtedness status of the households. Thus, there were three mpce classes, namely less than A, A to B, and B and above. The cut off points were determined at the State level on the basis of mpce obtained from the survey on consumer expenditure, NSS 43rd Round, such that the mpce classes 1, 2 and 3 respectively were constituted by bottom 30 per cent, middle 60 per cent and top 10 per cent of urban population of the State. These mpce classes were further subdivided by indebtedness status of the households to form seven AIDIS sub-strata. The composition of the seven sub-strata along with the allocation of samples to the different sub-strata are given below :

Composition of sub-Strata in Urban Sector

Sub-stratum No.	Composition of the sub-stratum	Allocation of samples
1	2	3
1.	Indebted households belonging to mpce class-1	1
2.	Not indebted households belonging to mpce class-1	1
3.	Households indebted to institutional agencies belonging to mpce class-2	1
4.	Households indebted to non-institutional agencies only and belonging to mpce class-2	1
5.	Not indebted households belonging to mpce class-2	2
6.	Indebted households belonging to mpce class-3	2
7.	Not indebted households belonging to mpce class-3.	1

From each of the sub-strata, required number of sample households were selected systematically with a random start.

For collection of data on consumer expenditure survey, two households were selected circular systematically in both rural and urban areas from the frame of all households in the village/urban block (surveyed hamlet groups/sub-block).

Total sample size in the central sample consisted of 4,328 villages and 2,484 blocks, besides the customary price villages. The sample sizes of the States and Union Territories which participated at least on an equal matching basis consisted of 4,724 villages and 3,076 blocks.

The survey envisaged the visit to each sample unit on two occasions. In the first visit, listing schedules (Sch. 0.1 and 0.2) were canvassed and in the sample households Sch. 18.1 (Schedule for the first visit) and Sch. 18.2 (first visit Schedule) were canvassed. Since the workload of the first visit was more, it was expected that the first visit was to continue till the end of October, 1992. During the second visit, which was to start from September, 1992, and to end in December, 1992. Sch. 18.1 and 18.2 meant for the second

visit were canvassed by making a revisit to the sample households already visited during the first visit. The survey period of the round was divided into two sub-rounds. Sub-round-1 was to consist of the first half of the survey period of each visit and sub-round-2 of the remaining period. The period of the whole round was 12 months (January to December, 1992).

Field work

28.3 The field work was started on 1 January, 1992, and was completed by 31 December, 1992. 74,932 mandays were spent on the field work. Data were collected through a set of schedules by seeking oral information from respondents and by supplementing the information through the records wherever available. A team of full-time regular and trained staff of the NSSO, comprising 891 Investigators and 426 Assistant Superintendents, were deployed in the field work. The field staff was thoroughly trained on concepts and definitions and operational procedures followed in the conduct of survey. The field work in each of the first stage units was inspected by the first level supervisory officers, i.e., Assistant Superintendents, supplemented by supervision by higher level officers. The total number of schedules canvassed was

1,47,152 for sch. 18.1 on land & livestock holdings and 1,22,616 Sch. 18.2 on debt & investment. It took about 11-12 days to canvass the schedules from a sample in the first and second visits taken together. About two to three hours were consumed to canvass each type of schedule. The extent of non-response at household level was insignificant. However, if a

sample could not be surveyed due to being not identifiable, not traceable or not accessible, the same was substituted. Similarly, if a sample household could not be surveyed due to temporary absence of the respondents from sample or refusal, etc. it was substituted with the household having next sampling serial number, provided it had not been already surveyed.

DIRECTORATE OF ECONOMICS AND STATISTICS, NAGALAND, KOHIMA

29. Family Budget Enquiry-1992-93

Introduction

29.1 The Family Budget enquiry, *inter-alia*, envisages providing necessary data base for construction of index of consumer prices at two different points of time of a fixed basket of goods and services representing the consumption level (or the level of living) of a designated class of people. The first such survey was conducted by the State Govt. of Nagaland during 1980-81 with limited purpose, pursuant to the requirements of the Nagaland Pay Commission during 1980. The scope and coverage of the enquiry was restricted to six District headquarters and one sub-divisional headquarter and a sizeable sample was drawn at random from amongst the Class III and IV employees in the public sector. The consumption pattern of these employees was studied carefully for a period of three months, which was too short a period, to reflect any seasonal and secular fluctuations. However, this served as the basis for determination of the weighting diagram for the Consumer Price Index Numbers with base 1980-81.

In view of the base year being very old and also because lots of social and economic transformations had taken place during this period, the State Government decided to shift the base year from 1980-81 to 1992-93. With this end in view the fresh Family Budget Enquiry was taken up on ad hoc basis with effect from September, 1992.

The main aim of the Family Budget Enquiry was to have data base for providing weighting diagram for construction of the cost of living index for urban non-manual employees. The enquiry was conducted in eight towns, namely Kohima, Dimapur, Mon, Tuensang, Mokokchung, Zunheboto, Wokha and Phok. Of these, the last centre was declared census town only during 1991 Population Census.

All together 86 items had been selected for the enquiry which were considered to be most essential items and truly representative of the tastes, habits, customs and necessities of the people to whom the

index number would relate. These items were grouped into five broad heads, namely (i) food articles, (ii) clothing, (iii) fuel and lighting, (iv) rent and taxes, and (v) miscellaneous.

Sampling design

29.2 Family Budget Enquiry had basically a two-stage stratified sampling design. First stage units were the urban frame survey blocks for Kohima, Dimapur, Mokokchung, Tuensang, Wokha, Mon, Zunheboto, and the 1991 houselisting enumeration blocks for the new town Phok, added in the 1991 Population Census. The second stage sampling units were the households in the selected first stage units. Each of the eight census towns had been taken as separate stratum and the UFS blocks/EBs were selected independently for each stratum. From each stratum, two UFS blocks/EBs were selected circular systematically with a random start independently giving each block an equal probability of selection. The second stage units were also selected circular systematically. From each of the first stage units, six households representing non-manual workers were selected randomly.

A total of 14 sample blocks, two enumeration blocks and 96 households were surveyed during the period of enquiry. The size of the sample had been kept at a minimum based on the consideration of the strength of the investigating staff available with the District Statistical Offices.

Field Work

29.3 Field work was started on 1st September, 1992, and completed on 31st December, 1993, by spending 8,328 mandays in the field.

The State of Nagaland adopted the same method of data collection of daily consumer expenditure as adopted by the State of Punjab in their Family Budget Enquiry. Under this system, the head of household (housewife or any adult member of the family in the absence of the head) was appointed as Data Recorder for a period of 12 months commencing from Septem-

ber, 1992. The head of the household was required to enter in the register provided to him/her the data on consumer expenditure on the concerned date and the week of the month. In order to make the data reliable, the head of the household was provided an incentive in the form of an honorarium of Rs. 20 per month.

The Investigators conducting the field work were full time employees of the Directorate of Economics and Statistics. They visited the Data Recorder once a week invariably and collected data through a schedule from the register maintained by the latter on the first day of the following week. The work of the investigators was supervised by the District Statistical Officers. The District Statistical Officer was required to carefully scrutinise the entries made by the Investigators. He was also required to make surprise checks of each one of the 12 sample households of a town invariably once in a month and compare the entries made by the Investigators with the Data Recorder's register. Inconsisten-

cies in the two sets of data were reconciled with the help of the Data Recorder and the Investigator. Both the primary field workers and the supervisors were given proper training before their deployment in the field.

A total of 4,956 schedules were canvassed during the course of field investigation.

Data processing

29.4 Data collected through the 4,956 schedules were processed by two staff members of the Directorate of Economics and Statistics. About 136 and 16 mandays were spent respectively in the central office and in the field office on pre-tabulation processing of data. The data were tabulated manually by the Directorate's staff and completed in about 720 mandays. The report entitled 'Family Budget Enquiry 1992-93' is expected to be released sometime by the end of 1994. The cost of survey is roughly about Rs. 85,000.

TATA INSTITUTE OF SOCIAL SCIENCES DEONAR, BOMBAY

30. Sociological Impact of Total Literacy Campaign —The Case of Midnapore, West Bengal.

Introduction

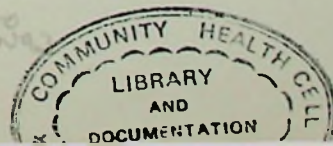
30.1 Tata Institute of Social Sciences, Bombay, conducted this *ad hoc* survey at the instance of Madinipur Saksharata O Rog Pratishod Samiti. The main objectives of the survey were to study (i) the content of literacy beyond the three R's, (ii) the impact of Total Literacy Campaign (TLC) on collective consciousness of the people involved in the campaign as well as the learners, and (iii) the impact of the campaign on political and social awareness of the neo-literates. The whole District of Midnapore in West Bengal comprising 153 villages in the seven sub-divisions, were covered for the survey. Broad subject heads on which the information was collected were collective consciousness, social awareness, political consciousness and scientific temper of the neo-literates. The data were collected with reference to the date of the survey.

Sampling design

30.2 A multi-stage sampling design was adopted for the survey. Blocks, neo-literates and illiterates were the sampling units at the different stages. Looking into the huge number of learners of about 3,01,327 by the end of December, 1991, who had completed a particular stage of learning and in view of financial and manpower constraints, it was decided to take a

sample of 3,050 neo-literates and 950 illiterates (altogether 4,000 respondents) for the survey. The main samples of the neo-literates and the illiterates were equally distributed among all the sub-divisions of the District. Out of a total of 54 blocks and 11 urban blocks in the District, a total of 21 blocks were selected at the first stage. As the educational performance of the blocks under the different sub-divisions was not uniform, these were grouped into three categories, namely (a) educationally advanced, (b) educationally average, and (c) educationally backward. The categorisation was based on the particular block's performance range in effective literacy rate as per 1991 Census. Thus, blocks having the effective literacy rate of 728 and above were categorised as 'advanced'; those having effective literacy rate between 648 and 728 were categorised as 'average'; and those below 648 were categorised as 'backward'. The choice of the type of blocks and their allotment to a particular sub-division was made on the basis of the proportion of each category of blocks in each sub-division. The sample of neo-literates and illiterates were equally distributed among the 21 blocks selected from all the seven sub-divisions of the Districts. In order to select the villages within the blocks, block level functionaries were requested to identify the villages that were very successful in the literacy campaign. Accordingly, 116 villages were identified in the 21 blocks. A sample of 3,087 neo-literates was drawn from those villages. Similar-

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ly, from the 49 villages identified with poorest performance in the literacy campaign a sample of 902 illiterates was drawn. The total number of villages worked out to be 153 because in 12 villages both neo-literates and illiterates were selected as samples.

Field work

30.3 Field work was conducted during 3rd—14th February, 1992, by spending about 1,260 madays in the field. The data were collected through field enumeration method by seeking oral information from respondents and by visual observations. The primary field workers consisted of 84 Investigators who conducted the field work under the charge of 21 team leaders. All these workers were full-time and worked in the field for 12 days. Before their deployment in the field, intensive training was imparted to both Investigators and the team leaders. The Project Director also made concurrent checks of the data collected by the Investigators. Two types of schedules, namely interview schedule and village schedule, were utilised for collecting details on various aspects of the survey. On an average, each Investigator conducted five interviews per day. About an hour was spent for filling of one schedule. The extent of non-response was of the order of about two to three per cent.

Data processing and Report

30.4 The pre-tabulation processing and the tabulation work in respect of data collected through all

the 3,989 schedules was done by the Project Director with the help of personal computers. About 30 days each was spent on pre-tabulation processing and tabulation of the data. The first set of tables were ready by 10th April, 1992, and the final report was made available by the end of May, 1992.

The major findings of the report were :

1. The views expressed by major political parties, District administration, panchayat, etc., show that the Total Literacy Campaign has generated a sense of collective consciousness among all concerned; especially the neo-literates have been able to achieve high level of political consciousness, social awareness and scientific temper and functionality.
2. Sociological impact was much greater in the case of women.
3. The impact was lower in case of artisans and similar backward classes. However, Scheduled Castes/Scheduled Tribes have shown higher level of consciousness and thus benefited more out of the literacy campaign.
4. Within blocks and villages, in some cases, the neo-literates from educationally backward blocks and socio economic backward villages have performed much better than their counterparts in the advanced blocks and developed villages.

31. Girl Child and the Family.

Introduction

31.1 This was an *ad hoc* survey conducted by the Tata Institute of Social Sciences, Bombay, at the instance of the Central Ministry of Human Resource Development, Department of Women and Child Welfare, New Delhi. The main objectives of the survey were (i) to identify the strengthening and weakening factors in the upbringing of girl child in a family and (ii) to observe the significance of economic, cultural and educational variables in the situation of the girl child. The survey was conducted in the rural areas of two selected Districts of the State of Maharashtra and selected urban wards in the urban area of Bombay metropolis. The broad subject heads on

which the information was collected were religion, caste, occupation, income and marital status of each member of the household, type of housing facilities, consumption pattern etc., collected through household schedule; education, health, socialisation, etc., collected through girl child schedule; and education, occupation, income, opinion on size of her family, health condition, pregnancy details, ideas of upbringing of male and female children, awareness about immunisation facilities and family planning devices collected through mother schedule.

Sampling design

31.2 A multi-stage sampling design was adopted for the survey and Districts, villages/urban wards, households and girl child were the sampling units at various stages. The development of Districts was

decided as the criterion for selection of Districts in the rural areas. For this reason, the Districts in the State were categorised as developed and under-developed based on economic index (1985) prepared by the Centre for Monitoring the Indian Economy, Bombay. Thus, rural Districts representing positive development were treated as developed and those with negative development were treated as under-developed Districts. From the two categories of Districts, Kolhapur District was selected from top 25 per cent Districts (representing positive development index) and Osmanabad District from the bottom 25 per cent Districts (representing negative development index). For selection of villages/urban wards, the female literacy level was taken as the criterion. For this purpose, the villages in the two Districts were arranged in descending order of their female literacy level. From each of the two Districts, one village with higher female literacy level and one with lower literacy level was selected at the second stage. Thus, from Kolhapur District, Shiye and Dhanod villages were selected to represent respectively the top 25 per cent villages and the bottom 25 per cent villages. From Osmanabad, however, three villages, namely Sindphal, Vadgaonlakh and Khandela, were selected wherein Sindphal village represented the top 25 per cent villages and the remaining two villages represented the bottom 25 per cent villages.

In the urban area of Bombay metropolis, Ganeshmurtinagar was selected to represent high female literacy in the low socio-economic strata location (50 households) and 'transit camp' representing high female literacy in the middle socio-economic strata location. Both these areas were part of ward 'A' of Bombay. Indiranagar was selected to represent low female literacy in the low socio-economic strata and Deonar Municipal Colony was selected representing low female literacy in the middle socio-economic strata location.

For selection of households in Osmanabad District, the frame thrown up by the 'survey on literacy levels' conducted by the Zila Parishad Schools was utilised. For Kolhapur District, the frame was made available through the Panchayat records. For the urban area in Bombay metropolis, the house numbers allotted by the Municipal Corporation served as the sampling frame. In Deonar Municipal Colony, the household list prepared by the Deonar Municipal Maternity Home served

as the sampling frame. After identifying the households with girl children in the age group of 17-18 years, 100 households were selected from each village in the rural areas. From each household, one girl child along with the mother of the girl child were interviewed to collect detailed information on various aspects of the survey. In case the household had more than one girl child, one girl child was selected by simple random sampling method. In case of urban areas, from each of the localities, namely Ganeshmurtinagar, transit camp, Indiranagar and Deonar Municipal Colony, 50 households were selected, and from each household a girl child and her mother was selected as for the rural area.

Field work

31.3 The field work was done during December 1990, and April, 1991. Data were collected through structured schedules, through visual observations and measurements. Establishment records available from various sources like Panchayats, schools, Zila Parishads, taluka offices, ward offices, hospitals and Revenue Department, were also consulted to supplement the data requirement. The field work was done by a team consisting of one Project Director, One Research Officer and six Research Investigators. The primary data collection was done by six Research Investigators under direct supervision of the Research Officer. The Research Officer accompanied the Research Investigators in the field and provided feed back whenever necessary. Field workers were provided with adequate training before their deployment in the field. A total of 600 household schedules, 600 mother schedules and 600 girl child schedules had been canvassed during the course of survey. A minimum of three interviews and a maximum of five interviews were prescribed for each Investigator for a day. About two hours were spent on collection of data through a schedule. The non-response was of the order of 30 per cent.

Data processing

31.4 All the 1,800 schedules were processed by seven persons (one deployed on scrutiny and six on coding). The tabulation of data was done by electro-mechanical method. At the time of reporting the survey, preparation of report on the survey was still in progress. The total cost of the survey was estimated to be Rs. 1.75 lakhs.

NATIONAL COUNCIL OF APPLIED ECONOMIC RESEARCH, NEW DELHI

32. Evaluation Survey of National Programme on Improved Chulha

Introduction

32. This was an *ad-hoc* survey conducted by the National Council of Applied Economic Research, New Delhi, at the instance of the Central Ministry of Non-Conventional Energy Sources. The main objectives of the survey were (i) to evaluate the working, non-working and uncommissioned chulhas, (ii) to evaluate the National Programme of Improved Chulhas (NPIC) in terms of fuel savings and reasons for non-adoption of the improved chulhas, (iii) to find out the efficiency of the improved chulhas in field conditions relative to traditional chulhas, (iv) to assess management information system adopted at different levels and suggestions for improvement, (v) to assess the availability of trained personnel including SEWs for implementing the chulhas programme and the role of technical back up units, (vi) to assess the present level of involvement of voluntary organisations and suggestions for their further involvement, and (vii) to examine the infrastructural availability at present at State/District/Block level for implementation and suggestions for improvement. The whole of the country was covered for the survey and the estimates were required at regional and all-India level. The broad subject heads under which the information was collected for beneficiaries of improved chulhas were family size, food consumption, caste, education of the head of the household, type of chulha, income

range, status of improved chulhas as on 1st April, 1992, i.e., whether working, not working, not installed, not being used, etc., implementing agencies (Government/voluntary agency/Khadi and Village Industries Commission), intensity of use during the reference period 1991-92, current fuel pattern, fuel pattern before installing improved chulha, qualitative information on attitude of households on usefulness and their perceptions, problems, etc. The subject heads on which the information was collected from non-users of improved chulhas were family size, food consumption, caste, education of the head of the household, type of chulha (traditional, open/closed, etc.), income range, current fuel pattern, awareness of the programme of NPIC, whether intend to install improved chulha, and the reasons for non-acceptance. Data were collected with reference to April, 1992, for status of the improved chulhas and with reference to the financial year 1991-92 for fuel consumption pattern and the annual income range.

Sampling design

32.2 Based on the experience of the other evaluation studies of target-oriented schemes, the Council decided that a well-spread sample of 16,000 households would provide reasonable estimates at regional level. The country was accordingly divided into six zones for the purpose of selection of different sample units. The classification of the States by regions is given below :

Region	States/Union Territories included in the Region
North	Haryana, Himachal Pradesh, Jammu & Kashmir, Uttar Pradesh, Punjab and Delhi.
South	Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Pondicherry and Lakshadweep.
East	Bihar, Orissa, West Bengal, Sikkim, and Andaman & Nicobar Islands.
North East	Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura.
West	Gujarat, Maharashtra and Goa.
Central	Madhya Pradesh and Rajasthan.

Thus, in all, 29 States and Union Territories have been covered for the study.

A multi-stage stratified sampling design was used for selection of sample households of improved chulha owners while a purposive sampling was adopted for selection of households of non-users of improved chulhas, keeping in view that the traditional chulha owners have similar characteristics with regard to family size, income, type of food and fuel use. To provide adequate coverage of spread of sample households within a State, a large number of

Districts were selected at the first stage. It was felt that a sample of households spread over one out of every three Districts would provide an adequate coverage at national level. While selecting Districts at State level, the same ratio was maintained except in case of Arunachal Pradesh, Assam, Jammu & Kashmir, Nagaland, Manipur, and Sikkim, because of inaccessibility and terrorist activities in some of these States. However, the shortfall in the number of Districts selected in these States was made up by selecting more Districts in some other States at the regional level. A total of 173 Districts, forming

about 39 per cent of the total Districts, were selected at all-India level for the survey. These Districts were selected independently from each State with probability proportional to the total number of improved chulhas installed in the District during the last three years, i.e., 1988-89, 1989-90 and 1990-91. At the second stage, from each selected District, one to three blocks were selected depending on the availability of improved chulhas in these blocks for all the three years and of different agencies. At the third stage, a random sample of villages were drawn independently from these blocks after stratifying the villages by year of installation of improved chulhas and by agencies. At the fourth stage, from each village, eight beneficiaries of improved chulhas and two non-users of improved chulhas were selected following simple random sampling procedure. An additional sample of ten per cent of beneficiaries (owner of improved chulhas) was selected and kept in reserve list so that the households could be replaced if it was found not owning an improved chulha to get sufficient users of improved chulha. Thus, a total of 1,622 villages were selected for the study. This included 118 villages where an attempt was made to estimate the fuel efficiencies from households using improved chulha under field conditions relative to the conventional chulha through actual weighing. A total of 16,167 households and 12,956 beneficiary households were selected for the study.

Because of non-availability of a complete frame of beneficiaries for the year 1991-92, a representative sample of 1991-92 could not be drawn randomly and so a few extra households of improved chulhas already installed in 1991-92 were selected purposively for this study and the results were presented separately. This was done because whereas a probability sampling technique was adopted for selection of households of beneficiaries of 1988-89, 1989-90 and 1990-91 a non-probability sampling was adopted for the year 1991-92 and these could not be combined to get overall results.

Keeping in view one of the objectives of the survey to estimate the fuel efficiencies of installed improved chulhas under the field conditions relative to traditional chulhas, a sample of households from 118 villages were selected to record data on consumption of firewood and other fuels through actual weighing.

Field work

32.3 The field work was started on 15th April, 1992, and completed on 30th June, 1992, by spending about 15,000 mandays in the field. Data were collected through field enumeration method by seeking oral information from respondents in the selected households and through village officials. Establishment records,

wherever available, were also taken into consideration for supplementing the information. Primary data were collected by *ad hoc* staff appointed by the Council. Supervision was exercised by the permanent staff of the Council. On an average, for six primary workers one Supervisor was deployed. Both the primary and supervisory staff were given fifteen days training before their deployment in the field. The Supervisors were required to check questionnaires filled-in by primary worker on the spot. Two types of questionnaires were canvassed during the course of survey.

For the purpose of estimating the fuel efficiency of installed improved chulhas under field conditions relative to traditional chulhas in 118 villages, consumption of firewood and other fuel was collected through actual weighing. The households using improved chulhas and non-users of improved chulhas were contacted in the evening and requested to keep aside the piles of firewood/crop wastes, etc., that they planned to use the following day. The pile was weighed using balance and recorded. The primary worker also ensured that households concerned used the fuel from the same pile the next day. On the third day, the unburnt wood as well as the leftovers of the pile was weighed and recorded. The difference between the two was recorded as the day's consumption of fuel. Alongwith this, the usual questionnaires for user/non-user households was also canvassed with the additional information on the actual quantity of food-cooked on that particular day, number of cooking etc. Thus, from 118 villages, 722 user households using fixed chulhas and 49 households using portable chulhas other than households using traditional chulhas where the same method was adopted to record the day's fuel consumption, were covered for this part of the study.

The data collected through households were supplemented with village schedule filled-in after detailed discussions with village elders, village level workers, etc. Data were also collected through secondary sources like State/District/Block and other Departments on physical targets, achievements, staffing pattern, etc.

Data processing

32.4 Data collected through 16,167 household questionnaires and 1,622 village level questionnaires were processed by 40 persons. Tabulation of data was done with the help of computer. In order to ensure accuracy of data tabulated, consistency checks were adopted. The draft report has been submitted to the Ministry of Non-Conventional Energy Sources and was still awaiting approval when the survey was reported. The survey was estimated to cost around Rs. 37 lakhs.

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