



Annual Report 2015-16

The National Statistical Commission have the privilege to present their Tenth Report, as required under the Government of India Resolution dated 1st June 2005 published in the Gazette of India Extraordinary Part-III Section-4.

This Report covers the period from April 01, 2015 to March 31, 2016.

**National Statistical Commission
New Delhi**

ACKNOWLEDGEMENT

The National Statistical Commission wishes to thank the various Government Ministries/ Departments/ Offices and many academicians and experts for their cooperation and the valuable inputs and suggestions made during their interactions with the Commission. It particularly appreciates the cooperation extended by the Ministry of Statistics and Programme Implementation in the effective functioning of the Commission.

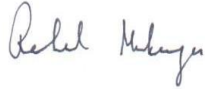
The Commission also wishes to place on record the active cooperation and support, it has received from senior officials, in particular from Dr. T.C.A. Anant, CSI, Shri Ashish Kumar, DG, CSO and Smt. Amarjeet Kaur, DG In-Charge, NSSO. The Commission expresses its deep appreciation of the role played by Shri M.V.S. Ranganadham, Dy. Director General and of the supporting staff in the Commission's Secretariat, without whose untiring efforts the work of the Commission would not have been possible.



(Dr. Rajiv Mehta)
Member



(Dr. Manoj Panda)
Member



(Prof. Rahul Mukherjee)
Member



(Shri Amitabh Kant)
CEO, NITI Aayog,
Ex-officio Member



(Prof. S. Mahendradev)
Member & Acting Chairperson

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List of Abbreviations

ACNAS	Advisory Committee on National Accounts Statistics
ADG	Additional Director General
AHS	Annual Health Survey
AICTE	All India Council for Technical Education
AISES	All India School Education Survey
AISHE	All India Survey on Higher Education
ASI	Annual Survey of Industries
ASSS	Annual Survey of Services Sector
ATR	Action Taken Report
CAP	Coordination and Publications Division
CAPI	Computer Assisted Personal Interviewing
CBEC	Central Board of Excise & Customs
CD-ROM	Compact Disc – Read-Only Memory
CES	Consumer Expenditure Survey
CPI	Consumer Price Index
CSI	Chief Statistician of India
CSO	Central Statistics Office
CNNS	Comprehensive National Nutrition Survey
DAC	Department of Agriculture and Cooperation
DDG	Deputy Director General
DEPR	Department of Economic Policy and Research
DES	Directorate of Economics and Statistics
DG	Director General
DGCA	Directorate General of Civil Aviation
DIPP	Department of Industrial Policy and Promotion
DLHS	District Level Household & Facility Survey
DOLR	Department of Land Resources
DPD	Data Processing Division
DSIM	Department of Statistics and Information Management
EB	Enumeration Block
EC	Economic Census
ESD	Economic Statistics Division
EU	Employment Unemployment
EUS	Employment Unemployment Survey
FOD	Field Operations Division
FSU	First Stage Unit
ICT	Information and Communication Technologies
ICS	Improvement of Crop Statistics
IIP	Index of Industrial Production
IS	Industrial Statistics
ISO	International Organisation for Standardisation
ISP	Index of Services Production
ITC-HS	Indian Trade Classification – Harmonized System
JSO	Junior Statistical Officer

LFPR	Labour Force Participation Rate
MCA	Ministry of Corporate Affairs
MHRD	Ministry of Human Resource Development
MOEF	Ministry of Environment, Forests & Climate Change
MOHFW	Ministry of Health and Family Welfare
MOSPI	Ministry of Statistics and Programme Implementation
MPCE	Monthly Per Capita Expenditure
MS	Master Sample
NAD	National Accounts Division
NCERT	National Council of Educational Research and Training
NCO	National Classification of Occupations
NFHS	National Family Health Survey
NHAI	National Highways Authority of India
NIC	National Industrial Classification
NIIT	National Institute of Information Technology
NITI	National Institution for Transforming India
NNMB	National Nutrition Monitoring Bureau
NRSA	National Remote Sensing Agency
NSC	National Statistical Commission
NSDA	National Skill Development Agency
NSS	National Sample Surveys
NSSO	National Sample Survey Office
NUEPA	National University of Educational Planning and Administration
OEA	Office of the Economic Adviser
ORGI	Office of the Registrar General of India
PLFS	Periodic Labour Force Survey
PSU	Primary Sampling Unit
PU	Proportion Unemployed
RBI	Reserve Bank of India
RSE	Relative Standard Error
RSOC	Rapid Survey on Children
SCIS	Standing Committee on Industrial Statistics
SDC	Statistical Disclosure Control
SCLFS	Standing Committee on Labour Force Statistics
SDP	State Domestic Product
SDRD	Survey Design and Research Division
SEEA	System of Environmental Economic Accounts
SMOC	Survey for Measuring Outcomes for Children
SPCL	Statistics of Prices and Cost of Living
SPI	Service Price Index
SSD	Social Statistics Division
SSO	Senior Statistical Officer
SSU	Second Stage Unit
SUT	Supply Use Tables
TAC	Technical Advisory Committee
TRW	Transport Research Wing
TUS	Time Use Survey
U-DISE	Unified – District Information System for Education

UFS	Urban Frame Survey
UGC	University Grants Commission
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
UNSD	United Nations Statistics Division
UR	Unemployment Rate
UT	Union territory
WB	World Bank
WG	Working Group
WPR	Work Participation Rate

Executive Summary

Introduction

1. The National Statistical Commission (NSC), consisting of a part-time Chairperson, four part-time Members and an ex-officio Member, has been functioning since 12th July 2006. The Chief Statistician of India (CSI) is the Secretary to the Commission.

(Paras – 1.1 to 1.6)

2. The NSC has a 13-point mandate. In addition, the functions of the Governing Council of the NSSO were entrusted to the NSC. The NSC has also been assigned oversight functions on the statistical surveys conducted by different Ministries at the Centre.

(Paras – 1.7 to 1.9)

3. The Commission held nine meetings during the financial year 2015-16. In all the nine meetings, the Commission deliberated on the issues referred to it and on issues covered under its mandate.

(Paras – 1.10 to 1.11)

4. A Committee on Fiscal statistics, constituted on the advice of the NSC under the Chairmanship of Dr. Saumitra Chaudhuri, submitted its report. The CSO (NAD) circulated the report to the concerned official agencies for eliciting views.

(Paras – 1.12 to 1.13)

5. On the recommendation of the NSC, the MOSPI constituted a Standing Committee on Services Sector to work out methodological details and oversee the conduct of the Annual Survey of the Services Sector. The Committee has been functioning.

(Para – 1.14)

6. The NSC recommended reconstitution of the Advisory Committee on National Accounts Statistics with the same terms of reference.

(Paras – 1.15 to 1.16)

7. On the recommendation of the NSC, the MOSPI constituted a Group of Officers under the Chairmanship of DG, CSO to work on formulating survey instruments to conduct Time Use Survey (TUS) through outsourcing under FOD supervision. The Group developed a schedule of inquiry for data collection and recommended its pre-testing in the field.

(Para – 1.17)

8. At the instance of the NSC, theme papers were invited by the CSO (SSD) on Gender Statistics and on Education Statistics. The CSO (SSD) prepared Discussion papers in respect of the two theme papers. The NSC desired that the Discussion paper on Gender statistics may be updated. The

theme paper and the Discussion paper on education statistics were reviewed by the NSC and the details of the review are given in this report.

(Paras – 1.18 to 1.19)

9. The annual expenditure on account of the establishment of the NSC is being met from a demand under the MOSPI voted by the Parliament.

(Paras – 1.21 to 1.22)

Review of statistical activities of the Central Statistics Office

10. A High Level Working Group under the Chairmanship of Dr. Saumitra Chaudhuri for revision of base year of IIP submitted its report, recommending a new set of activities to be carried out. The NSC considered the proposal and recommended that the CSO (ESD) may submit a note, clarifying *inter alia* whether data collection could be carried out under the provisions of the Collection of Statistics Act, 2008 and on resource requirements.

(Paras – 2.2 to 2.6)

11. Annual Reports submitted by the NSC for the years 2011-12, 2012-13 and 2013-14 have not been tabled in Parliament (along with ATRs) and hence, are also not in the public domain. The NSC recommended that action may be taken to ensure that all pending Reports (along with ATRs) may be tabled in Parliament.

(Paras – 2.7 to 2.12)

12. With regard to the timing/ requirement of conducting the seventh Economic Census, it was noted that the results of the 6th Economic Census (EC) were due for release and the NSC felt that it is too early to take a view on conducting the 7th EC.

(Paras – 2.13 to 2.19)

13. The CSO revised the base year of CPI from 2010=100 to 2012=100 w.e.f January, 2015. All-India CPI (Rural, Urban, Combined) at Sub-group, Group and All Items (General) level were compiled for the period January 2013 to December 2014 and placed in the public domain. In addition, all India Item CPI (Combined), for the period of January 2014 to December 2014, were also made available for public use. The NSC recommended release of Back Series for the period of January 2011 to December 2012 and the interpolated House Rent indices and consequently the modified Housing and Overall/ General Indices for CPI (Urban) and CPI (Combined) for the period of January 2013 to May 2013.

(Paras – 2.20 to 2.27)

14. The Standing Committee of Industrial Statistics recommended some changes in the methodology for the Annual Survey of Industries. The NSC endorsed the recommendations, except on a few aspects.

(Paras – 2.28 to 2.31)

15. The CSO (SSD) submitted a note on the study undertaken by them on the feasibility of constructing sex ratios for the age group 0-6 years, from RGI and NSS data. The NSC recommended that the CSO (SSD) may address problems noticed in its study and come out with appropriate analysis and findings.

(Paras – 2.32 to 2.35)

16. The NSC has initiated the process of taking quarterly reviews on the progress/ status of various statistical activities and initiatives of the CSO. During the period under report, three reviews were done and nine recommendations were made.

(Paras – 2.36 to 2.38)

Review of statistical activities of the National Sample Survey Office

17. The NSC has been exercising the functions of the erstwhile Governing Council of the NSSO. The functions include deciding the subjects for coverage in each NSS round, formulating methodology, and overseeing the processing of data and the release of survey reports/ unit level data by the NSSO. During the period under report, the NSSO released 13 reports based on the data of the 68th, 70th and 71st NSS rounds.

(Paras – 3.1 to 3.3)

18. The NSSO has not so far notified any standards/ practices on the issue of Statistical Disclosure Control. Statistical Disclosure Control primarily addresses two issues, namely, protecting the identification of the individual units, and release of reliable results. The NSC felt that general standards (minimum) have to be laid down for all types of sample surveys. Such standards cannot be survey specific and should not be left to be evolved after completing data processing in any survey. Accordingly, the NSC recommended easily implementable minimum general standards and suggested that the MOSPI may constitute an Expert Committee to evolve detailed standards.

(Paras – 3.4 to 3.11)

19. The issue of deciding a ten-year cycle of subjects for the future NSS rounds has been deferred and the NSSO, in consultation with the concerned departments, may re-examine the whole issue of ten-year cycle in a holistic manner. The NSC recommended that special efforts be made during 2016-17 to update and digitize UFS frame.

(Paras – 3.12 to 3.19)

20. The Core Group of experts of the 72nd NSS Round Working Group submitted its interim report on methodology for using shorter schedules in the NSS consumer expenditure survey and on feasibility of preparing a Master Sample for use in future NSS rounds. The NSC felt that the issues could be considered in more detail after submission of final report by the Core Group.

However, based on detailed deliberations made on the interim report, the NSC made five recommendations.

(Paras – 3.20 to 3.31)

21. The draft tabulation plan and estimation procedure for the NSS 72nd NSS round formulated by the Working Group were approved by the NSC with certain changes/ observations.

(Paras – 3.32 to 3.34)

22. The 73rd NSS round is devoted to a survey on 'Unincorporated Non-agricultural Enterprises (excluding 'construction'). The survey instruments formulated by the 73rd NSS Round Working Group were approved by the NSC.

(Paras – 3.35 to 3.38)

23. The 74th NSS Round would be an establishment focused survey on services sector, which would form a prelude to the Annual Survey on Services Sector. A Working Group for the 74th NSS Round constituted to formulate methodology for the round is functional.

(Paras – 3.39 to 3.41)

24. With regard to the sampling design for Periodic Labour Force Survey (PLFS), the NSC did not agree with the interim recommendation of the Standing Committee on Labour Force Statistics (SCLFS) on fixed panel design. The NSC desired that rotational panel design with design based estimates may be retained. The NSC approved the recommendations of the SCLFS with regard to the schedules of inquiry, subject to certain changes/ suggestions. The NSC recommended that the the WB CAPI solution may be adopted for the PLFS.

(Paras – 3.42 to 3.52)

25. The NSC has initiated the process of taking quarterly reviews on the progress/ status of various statistical activities and initiatives of the NSSO. During the period under report, three reviews were done and seven recommendations were made.

(Paras – 3.53 to 3.58)

Review of statistical activities of other Central Ministries

26. The Department of Agriculture and Cooperation (DAC) made a proposal to give a direction to the States, for introducing three new categories to enhance the nine-fold land use classification to twelve-fold one in their land records formats. The NSC considered the land use classifications in use in the States, in the National Remote Sensing Agency (NRSA), and in the Department of Land Resources (DOLR) as also the land use and land cover classifications prescribed as international standards under the System of Environmental Economic Accounts (SEEA). It was recognized that land-use statistics based on land use classification has to be evolved as a source of statistics beyond the scope of agriculture sector. The NSC recommended that

the MOSPI may constitute an Expert Group to make a detailed examination and provide advice within six months.

(Paras – 4.2 to 4.8)

27. The Theme paper titled “Statistics on Education” and the Discussion paper on the subject were considered by the NSC. Views of the Statistics Division in the MHRD were also considered. The NSC desired *inter alia* that the recommendations in the Theme Paper and the Discussion Paper may be considered by the MHRD in an appropriate way for implementation.

(Paras – 4.9 to 4.18)

28. The Office of the Economic Adviser (OEA), under the Department of Industrial Policy and Promotion (DIPP), submitted a note on Development of Index of Service Production (ISP) and Service Price Index (SPI). The NSC made four recommendations consistent with the need for integration of approaches, to be followed in respect of all the statistical products on services sector.

(Paras – 4.19 to 4.22)

29. The Ministry of Health and Family Welfare (MOHFW) submitted a proposal on conducting Comprehensive National Nutrition Survey (CNNS). The NSC made seven recommendations to further improvise the survey.

(Paras – 4.23 to 4.28)

30. The National Highways Authority of India (NHAI) submitted a proposal for conducting a study on socio-economic impact of national highways on rural population. The NSC felt that the purpose of NHAI could be met possibly in two ways: namely, (1) undertaking an analytical study using secondary data available; and (2) re-surveying a few villages connected with national highways for which data is available from previous surveys. The NSC recommended that the NHAI may first consider both the options and in case they require a survey for the proposed study, they may place a formal proposal before the NSC, indicating the objectives with more clarity.

(Paras – 4.29 to 4.36)

Chapter-1

Introduction

Setting up of the National Statistical Commission (NSC)

1.1 The Government of India resolved the setting up of a National Statistical Commission (NSC); *vide* Notification No. 85 dated 1st June 2005 published in the Gazette of India, Extraordinary, Part-III-Section-4. The Commission consists of a part-time Chairperson, four part-time Members and Secretary, Planning Commission as the *ex-officio* Member.

1.2 During the period under report, the Planning Commission was replaced by the NITI Aayog (National Institution for Transforming India). On 15-01-2015, the Government declared the NITI Aayog as successor in interest of the Planning Commission. Accordingly, the aforementioned Notification dated 1st June 2005 has been amended *vide* Notification No. 19 published in the Gazette of India Weekly (9-15 May 2015). As a result, the Chief Executive Officer of the NITI Aayog has been made the *ex-officio* Member of the NSC, in place of the Secretary, Planning Commission, with effect from 24th March, 2015.

1.3 The Chief Statistician of India (CSI) is the Secretary to the NSC. He has a dual role, as he is also the Secretary to the Government of India in the Ministry of Statistics and Programme Implementation (MOSPI). In order to support the CSI in providing assistance to the NSC in the discharge of its functions, a small secretariat comprising a Deputy Director General and a Director with other support staff has been created.

1.4 The service conditions of the part-time Chairperson/ Members of the NSC and of the CSI have been laid down in the Government of India Notification No. 465 dated 10th May 2006 published in the Gazette of India, Extraordinary, Part-II-Section-3-Sub-Section (ii).

Composition of the Commission

1.5 Constituted, from time to time, in accordance with the aforementioned Notifications, the NSC has been functioning since 12th July 2006. The part-time Chairperson/ Members of the NSC have a maximum tenure of three years. The names of the persons holding part-time positions in the NSC during the period under report are given below:

Dr. Pronab Sen	-	Chairperson up to 24-02-2016
Prof. S. Mahendra Dev	-	Member, Also Acting Chairperson(since 25-02-2016)
Prof. Rahul Mukherjee	-	Member

Shri Ramesh Kolli	-	Member up to 02-06-2015
Dr. Rajiv Mehta	-	Member since 06-11-2015
Dr. Manoj Panda	-	Member since 09-11-2015

1.6 Dr. T.C.A. Anant was the CSI and Secretary to the Commission during the entire period under report.

Mandate of the Commission

1.7 Under the aforesaid Government of India Resolution dated 1st June, 2005, the NSC is mandated, -

- (a) to identify the core statistics, which are of national importance and are critical to the development of the economy;
- (b) to constitute professional committees or working groups to assist the Commission on various technical issues;
- (c) to evolve national policies and priorities relating to the statistical system;
- (d) to evolve standard statistical concepts, definitions, classifications and methodologies in different areas in statistics and lay down national quality standards on core statistics;
- (e) to evolve national strategies for the collection, tabulation and dissemination of core statistics, including the release calendar for various data sets;
- (f) to evolve national strategies for human resource development on official statistics including information technology and communication needs of the statistical system;
- (g) to evolve measures for improving public trust in official statistics;
- (h) to evolve measures for effective co-ordination with State Governments and Union Territory Administrations on statistical activities including strengthening of existing institutional mechanisms;
- (i) to exercise statistical co-ordination between Ministries, Departments and other agencies of the Central Government;
- (j) to exercise statistical audit over the statistical activities to ensure quality and integrity of the statistical products;
- (k) to recommend to the Central Government, or any State Government, as the case may be, measures to effectively implement the standards, strategies and other measures evolved under clauses (c) to (h);
- (l) to advise the Government on the requirement of legislative measures on statistical matters including the statute for the National Statistical Commission; and
- (m) to monitor and review the functioning of the statistical system in the light of the laid down policies, standards and methodologies and recommend measures for enhanced performance.

1.8 In addition to the aforesaid mandate, all functions of the Governing Council of the National Sample Survey Office (NSSO) were entrusted to the NSC with effect from 30th August 2006, in accordance with a decision of the Union Cabinet in its meeting dated 10th August 2006. The functions mainly relate to overseeing the conduct of National Sample Surveys (NSS) on various socio-economic subjects through the NSSO and the State DESs in the form of rounds, each round normally being of one year duration coinciding with the agricultural year. From the 68th NSS Round onwards, the NSC has been constituting Working Groups on subjects decided by it, in a manner that the Working Groups will be able to assist the NSC, in overseeing the entire gamut of survey activities for each round.

1.9 The NSC has also been assigned certain oversight functions in respect of the statistical surveys conducted by different Ministries at the Centre. For this purpose, the MOSPI notified Guidelines, *vide* Notification No. 232 dated 5th December 2011 published in the Gazette of India Extraordinary Part-III Section-4, requiring concerned Ministries at the Centre to obtain concurrence of the NSC for conducting any statistical survey. Apart from concurrence, the Guidelines provide for recommending of names of experts by the NSC for constituting Committees to formulate methodology etc., for conducting various surveys with the NSC's oversight and for finalizing survey reports in consultation with the NSC.

Working of the Commission

1.10 The Commission held nine meetings during the financial year 2015-16. The dates of the meetings are indicated below.

Meeting No.	Dates of the Meeting
74	6 th and 7 th April, 2015
75	25 th and 26 th May, 2015
76	16 th and 17 th June 2015
77	4 th and 5 th August 2015
78	29 th and 30 th September 2015
79	26 th and 27 th November, 2015
80	13 th January, 2016
81	9 th February, 2016
82	19 th February, 2016

1.11 In all the nine meetings, the Commission deliberated on the issues referred to it and on issues covered under its mandate. The Commission also had consultations and detailed discussions, with the concerned subject matter specialists, on improvements to the statistical system in the respective fields. Minutes of each meeting of the Commission were recorded and circulated to all the Members of the NSC and the same were confirmed in the subsequent NSC meeting after discussion. The recommendations of the Commission, as and when made, were forwarded to the concerned Government Departments/ Offices for appropriate action.

Constitution of Committees

1.12 The NSC is mandated to constitute professional committees to assist it on various technical issues. Apart from the NSS Working Groups constituted from time to time (mentioned in para-1.8), the details of other committees constituted at the instance of the NSC during 2015-16 are given in the following paragraphs.

1.13 A Committee on Fiscal statistics under the Chairmanship of Dr. Saumitra Chaudhuri, the then Member, Planning Commission was constituted on 17th April, 2014 by the MOSPI, on the advice of the NSC. Although the Planning Commission has been dissolved, the committee continued to function under the Chairmanship of Dr. Saumitra Chaudhuri and submitted its report on 2nd December, 2015. Prof. S. Mahendra Dev, Member, NSC co-chaired the Committee. The officers of the CSO (NAD) made a presentation on the Saumitra Chaudhuri committee report before the NSC in its 80th meeting. It was stated by them that they have circulated the report to the concerned official agencies for eliciting views and that they will come up before the NSC with more details on the report along with implementation strategy.

1.14 In its 70th meeting (September, 2014) , the NSC recommended that a Standing Committee on Services Sector may be constituted by the MOSPI to work out the methodological details and oversee the conduct of the Annual Survey of the Services Sector (ASSS). A proposal to constitute the Committee has been submitted by the CSO (ESD) in the 74th meeting of the NSC. The NSC approved the proposal, subject to inclusion of a representative of the Department of Commerce and of the Central Board of Excise and Customs (CBEC) in the Committee. Accordingly, the Committee constituted by the MOSPI on 21-10-2015 under the chairmanship of Dr. Arvind Virmani is now functioning.

1.15 The Advisory Committee on National Accounts Statistics (ACNAS) was last reconstituted in November, 2010 under the Chairmanship of Prof. K. Sundaram, after the revision of base year of national accounts from 2004-05 to 2011-12. The terms of reference of this ACNAS are as follows:

- (i) To review the data base and advise on data collection through sample surveys, type studies etc. for implementing the recommendations of the System of National Accounts-2008;
- (ii) To advise on the methodology for compilation and presentation of National Accounts Statistics for purposes of economic analysis and policy and on promotion of research in the field of National Accounts Statistics;
- (iii) To advise on undertaking studies for improvement of National Accounts Statistics in terms of coverage, adoption of new

classifications recommended by the United Nations Statistics Division (UNSD) to capture impact of recent policies/efforts of the government and development of sequence of accounts for various institutional sectors;

(iv) To provide guidelines on the presentation of methodology document on National Accounts Statistics; Sources and Methods as per new series; and

(v) To advise on any other matter referred to the committee by the National Statistical Commission in respect of national accounts.

1.16 The CSO (NAD) submitted a proposal in the 82nd meeting of the NSC for reconstituting ACNAS. After detailed deliberations, the NSC recommended that the ACNAS may be reconstituted by the MOSPI with the same terms of reference with the following composition:

(1) Dr. Manoj Panda, Member, NSC will be a Special Invitee in the ACNAS, representing the NSC.

(2) The non-official members (subject to their willingness) in the ACNAS will be as follows:

- (i) Prof. K. Sundaram - Chairman
- (ii) Prof. Biswanath Goldar
- (iii) Dr. S.L. Shetty
- (iv) Prof. N.R. Bhanumurthy
- (v) Dr. Shashank Bhide
- (vi) Dr. A.C. Kulshreshtha
- (vii) Shri Pratap Narain
- (viii) Shri Ramesh Kolli
- (ix) Shri Ashish Kumar
- (x) Dr. A.B. Chakrabarty
- (xi) Dr. Chetan Ghate
- (xii) Dr. Egambaram
- (xiii) Dr. A. Ganesh Kumar

(3) The official members in the ACNAS will be as follows:

- (i) Chief Economic Adviser, M/o Finance
- (ii) DG, CSO
- (iii) DG, NSSO
- (iv) Representative of NITI Aayog
- (v) Principal Adviser, Department of Agriculture & Cooperation
- (vi) Economic Adviser, Ministry of Corporate affairs
- (vii) Executive Director (DEPR/ DSIM), Reserve Bank of India
- (viii) Officer-in-charge (DEPR), Reserve Bank of India
- (ix) Officer-in-charge (DSIM), Reserve Bank of India

- (x) Directors of DESs of Karnataka, Odisha, Himachal Pradesh, Rajasthan, Nagaland
- (xi) ADG, CSO (NAD) – Member Secretary

1.17 In its 72nd meeting (December, 2014), the NSC recommended that MOSPI may constitute a small Group of Officers to quickly work on formulating survey instruments to conduct Time Use Survey (TUS) through outsourcing under FOD supervision. Accordingly, the MOSPI constituted a Group of Officers under the Chairmanship of DG, CSO on 5th February, 2015. In its 75th meeting, the NSC desired that the Group of Officers may expeditiously complete their work on preparing survey instruments. The officers of the CSO (SSD) made a presentation, before the NSC in its 78th meeting, on the latest status on the planning of Time Use Survey. It was stated that the Group of Officers developed a schedule of inquiry for data collection and recommended its pre-testing in the field to test the National classification of Activities for Time Use Survey, to develop appropriate methodology of data collection and to assess problems encountered during canvassing of schedules. The process of pre-testing was initiated in six Regional Offices of NSSO (FOD) and was expected to be completed by the end of October, 2015. The CSO (SSD) would submit feedback report on the pre-testing exercise to the NSC.

Theme papers invited on statistical matters

1.18 At the instance of the NSC, theme papers from subject-matter experts were invited by the CSO (SSD) in January, 2013. The CSO (SSD) was asked to prepare Discussion papers in respect of the theme papers received on Gender Statistics and on Education Statistics. The Officers of the CSO (SSD) made a brief presentation before the NSC in its 75th meeting on the theme paper on Gender statistics. The NSC desired in this meeting that the Discussion paper on Gender statistics may be updated including *inter alia* information on the following aspects and presented before the NSC.

- (1) Information on state-wise occupation, Earnings & Wages, etc., relating to Men & Women in the current status
- (2) Information available through NSS surveys

1.19 The theme paper on education statistics and the Discussion paper prepared by the CSO (SSD) on the subject were reviewed by the NSC and the details of the review are given in Chapter-4.

About this report

1.20 The details of NSC's review of statistical activities of the CSO and of the NSSO and the recommendations made thereof are given in Chapter-2 and Chapter-3 respectively. Details of review of statistical activities of other

Central Ministries and the recommendations of the NSC thereof are given in Chapter-4.

Expenditure of the Commission

1.21 The annual expenditure, on account of the establishment of the National Statistical Commission including salary and wages, domestic travel, office expenses, professional services, administrative services and requirements for day to day administration of the Commission, is being met from a demand under the MOSPI voted by the Parliament.

1.22 In the budget estimates for the year 2015-16, a provision of Rs. 139 lakhs was made for the NSC under the non-plan budget of the MOSPI. It was reported that an expenditure of Rs. 95.42 lakhs was incurred during the year 2015-16.

Chapter-2

Review of statistical activities of the Central Statistics Office

2.1 The NSC is mandated *inter alia* to evolve standard statistical concepts, definitions, classifications and methodologies in different areas in statistics, to monitor and review the functioning of the statistical system in the light of the laid down policies, standards and methodologies and to recommend measures for enhanced performance. In this chapter, the NSC reviewed some of the statistical activities of the Central Statistics Office (CSO), which is under the Statistics Wing of the MOSPI, and gave its recommendations.

Strengthening the source agencies of IIP and IIP unit of the CSO (ESD)

2.2 The CSO had set up a High Level Working Group (WG) under the Chairmanship of Dr. Saumitra Chaudhuri, former member, Planning Commission, for revision of base year of IIP and improvement of the overall system of compilation of the same. The WG submitted its report in 2014. A new set of activities to be carried out as per the recommendations of the WG has been planned in the IIP Unit of the CSO (ESD). The new set of activities includes the following items of work:

- (1) Establishing a web-based portal at CSO for collection of data directly from the manufacturing establishments
- (2) Quality assurance and analytical exercises for improvement of IIP and Industrial Statistics
- (3) Establishing a channel of exchange and interaction with the Central Board of Excise and Customs (CBEC) for validation and tabulation of production data in Excise returns towards improving the conceptual/methodological framework of IIP data and providing alternative measure of industrial output
- (4) Preparation of data sets and fact sheet on economic indicators at periodic intervals for analyzing IIP and industrial performance in total context
- (5) Statistical coordination to achieve the above goals

2.3 In the existing setup, problems in ensuring quality and adhering to prescribed standards of data have been encountered at the level of source agencies supplying data for IIP. Source agencies have often raised the issue of lack of statistically trained personnel in their Units. Absence of required skill-set in performing statistical operations such as compilation, validation,

estimation of non-response, adversely affects credibility of the statistical outputs. The new set of activities mentioned above will address all these problems.

2.4 The NSC in its 71st meeting recommended that in order to ensure timeliness and quality in the proposed revision of IIP, a detailed proposal to strengthen the source agencies and the IIP Unit of CSO in terms of manpower may be worked out in consultation with source agencies and presented before NSC. Accordingly, the CSO (ESD) submitted a proposal for augmentation of existing statistical capacity, for consideration and recommendations of the NSC, in its 75th meeting. The proposal indicates enhancing staff strength from 49 to 103 at different levels in nine source agencies and in the IIP Unit of the CSO (ESD).

Recommendations of the NSC

2.5 After considering the above proposal, the NSC recommended that the CSO (ESD) may submit a note to bring more clarity on the following aspects:

- a) Whether the data collection for new series could be carried out under the provisions of Collection of Statistical Act, 2008.
- b) Whether the source agencies in particular, the Office of Textile Commissioner and the Indian Bureau of Mines have separately moved any proposal for creation of posts.
- c) Whether any manpower requirements for the new series of IPP are included under the Cadre Review Proposal of Indian Statistical Service, being considered in the Government.

2.6 The above recommendations were forwarded to the CSO (ESD), *vide* communication no. 4(75)/2014-NSC dated 3rd June, 2015.

(Action: MOSPI)

Status of action on previous NSC Annual Reports

2.7 The MOSPI Notification dated 1st June 2005 (mentioned in Chapter-1) on the Government Resolution to constitute the NSC provides *inter alia* for tabling the Annual Reports of the NSC along with Action Taken Reports (ATRs) in both the Houses of the Parliament. Relevant extract of the Notification is given below:

“The Commission shall prepare, for each financial year, its Annual Report, giving a full account of its activities during the financial year and forward the same to the Central Government. The Central Government shall cause to be laid the Annual Report together with a memorandum of action taken on the recommendations therein, along with the reasons for the non-acceptance, if any, of any of such

recommendations before each House of Parliament. Where any recommendation or any part thereof concerns any State Government, the Commission shall forward a copy of such recommendation or part thereof to such State Governments which shall cause it to be laid before the Legislature of the State along with a memorandum explaining the action taken on the recommendations relating to the State and reasons for the non-acceptance if any, of any such recommendations.”

2.8 The work of coordinating implementation of recommendations given in the NSC Annual Reports is being handled in the CSO (CAP). The status of implementation of the directions in the aforementioned MOSPI Notification was reviewed by the NSC in its 76th meeting. By that time, the NSC had submitted eight reports to the Government (MOSPI), in respect of financial years 2006-07 to 2013-14.

2.9 It was noted that Annual Reports of the NSC for the years 2007-08 to 2010-11 along with ATRs were tabled in the Parliament. After tabling the Annual Reports along with ATRs, the MOSPI has been uploading them on its official website. Annual Reports for the years 2007-08 to 2010-11 and the ATRs for 2009-10 and 2010-11 are presently available in the MOSPI website.

2.10 As per the information available in the NSC Secretariat, Annual Reports submitted by the NSC for the years 2011-12, 2012-13 and 2013-14 have not been tabled in Parliament (along with ATRs) and hence, are also not in the public domain. The NSC expressed displeasure at this state of affairs, especially since the constitution of the NSC specifically mandates that its Annual Reports must be tabled in the Parliament. It was noted that the main reason for not tabling the Reports was that some Ministries/ Departments had not furnished their ATRs.

Recommendations of the NSC

2.11 On the basis of the aforementioned review, the NSC recommended that, -

- (1) time may be given up to 31st October, 2015 for receiving the ATRs from different Ministries/ Departments and the Annual Reports may be tabled in Parliament in the coming Winter Session, noting the non-compliance, if any, by the Ministries/ Departments; and
- (2) the position in respect of all the NSC Annual Reports may be verified and action may be taken to ensure that all pending Reports (along with ATRs) may be tabled in Parliament by the coming Winter Session of Parliament.

2.12 The above recommendations were forwarded to the CSO (CAP), *vide* communication no. 4(76)/2014-NSC dated 27th July, 2015.

(Action: MOSPI)

Conducting next Economic Census

2.13 It was noted that no definite periodicity has been followed for the six Economic Censuses conducted so far during the years 1977, 1980, 1990, 1998, 2005 and 2013. The Sixth Economic Census (EC) was conducted during January, 2013 – April, 2014.

2.14 The CSO (ESD) submitted a note on periodicity of conducting future Economic Censuses and the likely period of fieldwork for next (seventh) Economic Census. The note was considered by the NSC in its 78th meeting.

2.15 It was mentioned in the note that a survey (2006) conducted by the UNSD on the periodicity of conduct of Economic Census by various national statistics offices, in which 114 countries responded, revealed that more than half of the countries conduct EC every 5 years and in Asia (including China and Japan), more than 80 % of the countries conduct EC at 5-year interval.

2.16 The CSO (ESD) further mentioned in their note that international statistical standards (UNSD) recommend ECs to be conducted at regular intervals of time (five years) in order to establish sound benchmarks of basic economic statistics. The NSC, in its Annual Report for the year 2011-12, recommended *inter alia* that Economic Censuses may be conducted in India at regular and fixed interval of five years.

2.17 Based on the inputs and deliberations made in its 78th meeting, the NSC noted *inter alia* the following aspects:

(1) All-India Report and Directory of Establishments for the 6th EC are likely to be released shortly.

(2) When the Directory of Establishments for the 6th EC is released, it would be mapped with the Business Register prepared by States. The Directory may get updated in the process.

(3) There is also a long term requirement of integrating data of different censuses, which makes it mandatory to have data collected in the censuses for the same set of geographical units. In the 6th EC, data was collected using 2011 population census EBs, which facilitates integration of the data of the two censuses. However, the integration exercise is yet to be taken up.

(4) The data integration exercise of the 2011 population census data and 6th EC data will also facilitate a review of the sampling strategies followed in the EC follow-up surveys of the NSSO.

(5) The NSSO is presently examining the use of master sample frame in its surveys. If this method is adopted, the need for conducting an all India Economic Census may have to be re-considered.

(4) The next population census would be carried out in the year 2021, in which EBs may be carved out afresh. The details of the 2021 census EBs may be available by the year 2023, which would facilitate carrying out an EC in those EBs.

Recommendations of the NSC

2.18 In view of the fluid situation arising out of the aforementioned aspects, the NSC made the following recommendations:

(1) It is too early to take a view on the timing/ requirement of conducting the next (7th) EC.

(2) Comparison of Directory of Establishments obtained from the 6th EC and Business Register may be taken up for a few selected districts and results may be presented before the NSC.

2.19 The above recommendations were forwarded to the CSO (ESD), *vide* communication no. 17(1)(78)/NSC/2015-16 dated 15th October, 2015.

(Action: MOSPI)

Back series of Consumer Price Index (Base Year 2012=100)

2.20 A note was received from the CSO (NAD) on compilation of the Back Series of the Consumer Price Index (Base Year 2012=100) for consideration by the NSC in its 78th meeting. Officers of NAD made a presentation before the NSC in the meeting. Brief facts relating to the issue are given in the following paragraphs.

2.21 The CSO revised the base year of CPI from 2010=100 to 2012=100 w.e.f. January, 2015. The issue that came up because of this revision was to make available the back series. All-India CPI (Rural, Urban, Combined) at Sub-group, Group and All Items (General) level were compiled for the period January 2013 to December 2014 and placed in the public domain. In addition, all India Item CPI (Combined), for the period of January 2014 to December 2014, were also made available for public use.

2.22 It was reported that the TAC on SPCL has recommended the following procedure for computation of Back Series of CPI for the period of January 2011 to December 2012:

(a) Actual price data, in place of linking factor method, may be used to compute the Back Series.

(b) For all items, other than House Rent, Geometric Mean of the Price Relatives of current month prices over Base Prices of the year 2012 of

different markets may be taken as item indices. This method is being used for the existing series.

(c) For House Rent, Fixed Base method may be used for all the months of 2012 and chain base method in reverse direction may be used for months of 2011. If the average of the monthly House Rent indices for 2012 does not come close to 100 (i.e., between 99.5 and 100.5), the computed indices may be scaled to 100.

2.23 It was also reported that the representative of RBI, as a member of the TAC, suggested for interpolating the House Rent index for the period January–May, 2013, which has been kept at 100 due to non-availability of house rent data of complete stock of dwellings. The RBI also suggested *inter alia* that the rent for the period may be imputed with reference to the average change for the rent that are available in the elementary aggregates (i.e. overall mean imputation), by using the monthly house rent data which is available for 1/6th of the sample. Other alternative suggested by RBI for imputation was to carry forward the last observed index, (Back Series) for December 2012, for next five months i.e., up to May 2013.

2.24 Following the methodology suggested by the TAC for computation of Back Series (Items other than House Rent, and House Rent Index) and the first alternative suggested by RBI for interpolating the House rent Series for January to May 2013, the indices were compiled and results were presented in the 78th NSC meeting. The results were accepted by the NSC.

2.25 Detailed discussions took place in the 78th NSC meeting, on whether the interpolated House Rent indices and consequently the modified Housing and Overall/ General Indices for CPI (Urban) and CPI (Combined) for the period of January 2013 to May 2013 be released and placed in the public domain, which may create confusion among users since the CPI series on Base 2012=100 from January 2013 onwards is already published.

Recommendations of the NSC

2.26 After detailed discussions, the NSC made the following recommendations:

(1) Back Series computed for the period of January 2011 to December 2012, adopting methodologies mentioned in para-2.22, may be put in public domain.

(2) The interpolated House Rent indices and consequently the modified Housing and Overall/ General Indices for CPI (Urban) and CPI (Combined) for the period of January 2013 to May 2013 may also be released. This may also be declared as Back Series and a proper explanatory note may be given in order to avoid the confusion among users.

2.27 The above recommendations were forwarded to the CSO (NAD), *vide* communication no. 17(1)(78)/NSC/2015-16 dated 15th October, 2015.

(Action: MOSPI)

Changes in Annual Survey of Industries (ASI)

2.28 The Standing Committee of Industrial Statistics (SCIS) in its 27th meeting held on August 03-04, 2015 under the Chairmanship of Prof. B. N. Goldar, former Member, NSC, has recommended some changes in the methodology for the Annual Survey of Industries (ASI). The proposed changes were presented by the Officers before the NSC in its 79th meeting.

2.29 The changes proposed in the sampling design for the ASI to be implemented from ASI 2015-16 relate to use of varying employment cut-off to define Census sector in different States, increasing effective sample size, and excluding Government Departmental units from the ASI frame. The SCIS also suggested a number of modifications in the ASI schedule of inquiry covering, inter-alia, items relating to (a) Status code of the unit, (b) Treatment of Joint Returns, (c) Treatment of capital transactions/ convertible debentures/ subsidy and rebate/ non-operating expenses, (d) Details of contract workers by sex, (e) Research & Development expenditure, and (f) ICT & Energy conservations measures. The SCIS further recommended for excluding "Type of Ownership" code from the schedule due to redundancy and for modifying the codification structure of "Type of Organisation". The SCIS also recommended collecting information on availability of foreign investment and on product-wise details in terms of ITC-HS codes in the ASI. The SCIS also suggested that the coverage of ASI may be extended beyond the purview of the Section 2m (i) and 2m (ii) of the Factories Act, 1948 and the Bidi & Cigar Workers (Conditions of Employment) Act, 1966. For this purpose, Business Register being prepared by the CSO (NAD) and Directory of Establishments under finalization based on Sixth Economic Census will be used by the CSO (IS Wing).

Recommendations of the NSC

2.30 The NSC endorsed the recommendations of the SCIS, except on a few aspects, where the following recommendations were given:

- (1) With regard to the proposal to exclude units, having less than 10 employees for three consecutive years, from the survey coverage of ASI, it was noted that registration/ licensing criterion on no. of workers under the Factories Act relates to maximum number of workers who may be engaged on any day by the unit but not to average number of workers as followed in ASI, and that the definition of 'worker' under the Act is different from that followed in the ASI. This being the case, the no. of workers as per ASI may be different. Since, registration criterion is much stronger compared to the criterion based on number of workers (which may be volatile) for deciding the coverage under

ASI, and since the units may engage more number of workers subsequently, the proposal, to eliminate units having less than 10 employees for three consecutive years from the coverage under ASI, is not agreed to.

(2) The proposal to have joint returns compiled for all of those units having same State code, District code, 3-digit NIC code and management in conformity with formation of strata as per new sampling design at State x District x 3-digit frame NIC level is not agreed to, as this may pose problems in data collection. Hence, Joint Returns may be compiled for all of those units having same State x 3-digit NIC code. If figures in the joint return obtained at State level have to be allocated to district level, criteria for allocation may be worked out and additional information, as per the criteria worked out, may be collected in the joint returns.

(3) In the proposed modified structure for 'Type of Organisation', appropriate code may be provided for Limited Liability Partnerships.

(4) It was proposed that a new column may be added in the Output Block in the ASI schedule with heading 'Subsidy/ Rebate' under 'Distributive Expenses' to include subsidy/rebate product-wise and that the value in this column may be added to Gross Sale Value to arrive at the ex-factory value. It was decided to include only 'Subsidy' in place of 'Subsidy/ Rebate' in the relevant column of the Output Block.

(5) With regard to introducing data collection w.r.t ITC-HS codes in the Output Block, it was decided to create a separate Block to collect data on quantity and assessable value for each product in terms of ITC-HS code.

2.31 The above recommendations were forwarded to the CSO (ESD), *vide* communication no. 17(1)(79)/NSC/2015-16 dated 28th December, 2015.

(Action: MOSPI)

Report on child sex ratio

2.32 The NSC, in its 59th meeting (August, 2013), recommended that the CSO (SSD) may examine the feasibility of constructing the sex ratios for 0-6 years age group from the data of the Office of Registrar General of India and NSS data. The CSO (SSD) submitted to the NSC a note on the study undertaken by them on this issue. The officers of the SSD made a presentation on the study before the NSC in its 79th meeting.

2.33 From the note and the presentation, the NSC noted *inter alia* the following aspects:

(a) The study was undertaken to examine the feasibility of constructing the child sex ratios (0-6 years) for inter-censal years, using the Population Census data from RGI and NSS unit level data (50th, 55th and 68th rounds - employment and unemployment survey data) and to examine the reasons for difference between the ratios computed using projections from census data and actual ratios emerging from the NSS surveys.

(b) NSS data shows increasing trend over time in case of all-age sex ratio, in conformity with census data, but in case of child sex ratio the NSS data do not conform to the census trend.

(c) In the exercise of comparison of projected All-age sex ratio with the corresponding estimates from NSS surveys, it was found that for all-age sex ratio, the projected sex ratio from census data shows increasing trend in rural, urban and total but NSS data shows increasing trend only in urban. It was also observed that for the years 1994, 2000 and 2012, for all age sex ratios at the national level the estimates from NSS data were mostly within 1% of the estimates from projected Census data. So these estimates can be considered close. It may be concluded that it is feasible to construct all age sex ratios at national level from NSS employment and an employment survey data for inter census years.

(d) In the exercise of comparison of projected child sex ratios with the corresponding estimates from NSS surveys, it was found that while the child sex ratios from census data show a declining trend in rural, urban and total, the ratios derived from NSS data show an increasing trend in total, and do not reflect any definite trend in case of rural and urban.

(e) In the case of State level sex ratio estimates, considerable gap was noticed between the estimates from Census and NSS data. All age sex ratios estimated using NSS data are usually higher than the ratios obtained from census data, and the extent of differences as measured by percentage of difference vary between 2% to more than 4% in large number of cases. Child sex ratios estimated using NSS data are higher in some cases and lower in some cases, than the estimates obtained from census and the percentage of variation range from more than 2% to 10% in most cases.

(f) The study concluded that it is not feasible to construct child sex ratio from the NSS survey data. The child sex ratio, being a highly variable social indicator with significant variation existing between States and within States, a large sample would be needed to adequately capture child sex ratio situation in the country. In the sampled population of NSS employment unemployment surveys, number of persons in the 0-6 age group was found to be very small

and consequently the data are found to be inadequate to capture the child sex ratio at the national and state level.

(g) As the population estimates from NSS suffer from the problem of underestimation, with no definite trend shown sex-wise and is severe for lower age group, the study concluded that NSS population estimates are not suitable for estimating all India and State/ UT-wise child (0-6 years) sex ratios.

Recommendations of the NSC

2.34 The NSC recommended that the CSO (SSD) may address the following problems noticed in its study that were flagged by participants during deliberations in the 79th NSC meeting and come out with appropriate analysis and findings:

(1) It was noticed that only employment-unemployment survey data was used in the study, which as reported did not provide adequate sample size. NSS, being a multi-subject survey, covers different sets of households for different subjects. For example, along with employment-unemployment, the subject of consumer expenditure was also surveyed. This data also contains details relevant for estimating sex ratios. Taking this data enhances the sample size for estimating sex ratios etc. Moreover, if the State sample data collected by the DESs is also considered, the sample size could be further enhanced (procedure for pooling of estimates of central and State sample recommended by the NSC may be used).

(2) With regard to census age data (also survey age data), normally it is expected that there could be digit preference in reporting age, due to a host of reasons. As a result, heaping may be noticed in respect of numbers against certain age figures such as those ending with '0' or '5'. This aspect needs to be studied and if noticed, its effect needs to be eliminated/ reduced, before taking up comparison.

2.35 The above recommendations were forwarded to the CSO (SSD), *vide* communication no. 17(1)(79)/NSC/2015-16 dated 28th December, 2015.

(Action: MOSPI)

Progress/ status of various statistical activities and initiatives

2.36 The NSC has initiated the process of taking quarterly reviews on the progress/ status of various statistical activities and initiatives of the CSO. During the period under report, three reviews were done in the 76th, 79th and 82nd meetings of the NSC.

Recommendations of the NSC

2.37 The recommendations made by the NSC during the reviews include the following:

- (1) The CSO, in particular the NAD which has got ISO certification, may maintain and periodically update a manual containing induction material, for use as reference material by the officers/ staff presently working and by the new comers.
- (2) The CSO may technically support the MCA in analysing its database in respect of manufacturing & services sectors and in bringing out its own reports.
- (3) Reasons for major adjustments made while preparing SUT may be placed before the ACNAS, before placing the SUT in public domain.
- (4) The NAD may compile a national balance sheet on experimental basis and bring out a technical paper on it including the methodology used thereof.
- (5) Developing a Wage index may be considered for use as deflators in the services sector.
- (6) The progress in respect of implementation of the recommendations of the Expert Group on Green national accounts may be placed in the public domain from time to time.
- (7) The SMOC may be modified in the manner already recommended by the NSC to have it conducted in partnership with Universities and Population Research Centres.
- (8) Reports on the seminars/ workshops conducted from time to time may be circulated to NSC members.
- (9) The CSO (NAD) may bring out a paper on highlights of SDP revisions, after they have been placed in the public domain by the States.

2.38 The aforementioned recommendations were forwarded to the concerned Divisions in the CSO, *vide* communication no. 4(76)/2014-NSC dated 27th July, 2015 and communication no. 17(1)(82)/NSC/2015-16 dated 23rd February, 2016.

(Action: MOSPI)

Chapter-3

Review of statistical activities of the National Sample Survey Office

3.1 As already stated in para-1.8 of Chapter-1, the NSC has been exercising the functions of the erstwhile Governing Council of the National Sample Survey Office (NSSO), under the Statistics Wing of the MOSPI. The functions include deciding the subjects for coverage in each NSS round, formulating methodology, and overseeing the processing of data and the release of survey reports/ unit level data by the NSSO. The NSC has constituted Working Groups from time to time to assist it in exercising these functions. During the period under report, a number of activities relating to the NSSO have been reviewed and the recommendations of the NSC thereof have been forwarded to the DG, NSSO and the concerned Divisions of the NSSO.

3.2 During the period under report, the NSSO released the following 13 reports based on the data of the 68th, 70th and 71st NSS rounds.

NSS 68th round on "Household Consumer Expenditure and Employment Unemployment":

- (1) NSS Report No. 564 - Employment and Unemployment Situation in Cities and Towns in India
- (2) NSS Report No. 565 - Public Distribution System and Other Sources of Household Consumption
- (3) NSS Report No. 566 - Status of Education and Vocational Training in India 2011-12
- (4) NSS Report No. 567 - Energy Sources of Indian Households for Cooking and Lighting
- (5) NSS Report No. 568 - Employment and Unemployment Situation among Major Religious Groups in India

NSS 70th round on "Land and livestock holdings, Debt and investment and Situation assessment survey of agricultural households":

- (6) NSS Report No. 569 - Some Characteristics of Agricultural Households in India
- (7) NSS Report No. 570 - Household Assets and Liabilities in India

(8) NSS Report No. 571 - Household Ownership & Operational holdings in India

(9) NSS Report No. 572 - Livestock Ownership in India

(10) NSS Report No. 573 - Some Aspects of Farming in India

NSS 71st round on "Social Consumption: Health & Education":

(11) NSS KI (71/25.0) - Key Indicators of Social Consumption in India: Health

(12) NSS KI (71/25.2) - Key Indicators of Social Consumption in India: Education

(13) NSS Report No. 575 - Education in India

3.3 The NSSO also released in June, 2015, the Unit Level Data in respect of NSS 71st Round on "Social Consumption: Education and Health".

Statistical Disclosure Control in sample Surveys

3.4 The NSSO has been releasing survey reports and unit level data in the public domain in respect of the NSS. The survey reports contain analysis and tables. The unit level data is released after suppressing identification details. Apart from the NSSO, there are other official agencies who conduct sample surveys from time to time. NSSO, being the largest survey organisation and located in the nodal Ministry on Statistics, the practices followed by the NSSO, if properly documented, would provide guidance to other agencies. It was noted that the NSSO has not so far notified any standards/ practices on the issue of Statistical Disclosure Control (SDC), although they have been following some practices, which were not adequately documented.

3.5 While examining a few draft survey reports of the NSS for release, it was recognised that highlighting unrepresentativeness of small samples in providing estimates in the reports should be avoided. A preferred option would be to remove all such estimates which are deemed to be statistically unreliable on account of inadequate sample size or other reasons, to maintain consistency with the past and to avoid paradoxes.

3.6 The matter was deliberated in the 74th, 75th, and 77th meetings of the NSC. The papers submitted by the DDG, NSC Secretariat and the DDG, Computer Centre were considered by the NSC. The general practices followed in different countries, in respect of dissemination of sample survey reports and micro-level data without compromising on confidentiality and on security of data, and in particular, the practices in relation to dissemination of data along with underlying relative standard errors (RSEs) were also discussed in the meetings.

3.7 The NSSO furnished a note, for consideration by the NSC in its 77th meeting, on 'Statistical Disclosure Control (SDC) in sample surveys with respect to Employment and Unemployment Survey and Consumer Expenditure Survey of NSSO'. The officers of the NSSO made a presentation on the note before the NSC in this meeting.

3.8 From the note submitted by the NSSO and the presentation made in the 77th NSC meeting, the NSC noted *inter alia* the following points:

- (1) Statistical Disclosure Control (SDC) primarily addresses two issues, namely, protecting the identification of the individual units, and release of reliable results. The first issue was not addressed in the note and the presentation.
- (2) At present, no established standards exist for taking an objective decision about release of results or suppression of results based on the criteria of reliability of the results. It is necessary to strike a balance between the release of reliable results and the need of the users to have results which are not reliable but nevertheless useful since in some situations, the results which are not reliable are still considered useful by users, especially when no other estimates are available.
- (3) For working out standards, two aspects of reliability have been considered in the note and the presentation, namely, number of sample observations (sample counts) on the basis of which the estimates are derived and RSEs of the estimates.
- (4) In a typical table of NSS tabulation plan, there would be 51,408 cells, of which about 13000 cells might have non-zero values. Decisions on the non-zero cells have to be taken on the basis of their RSEs. Cell-wise RSEs are computationally expensive to be provided and the cell-wise sample counts are computationally less expensive.
- (5) In respect of the estimates relating to employment and unemployment, (a) the estimates (at cell level) are in general reliable (RSE less than or equal to 30%) when number of sample observation in a cell is more than 40, and (b) in some cases, RSE was less than or equal to 30% even when sample observations of the corresponding cells are less than 40.
- (6) In respect of the estimates relating to consumer expenditure, (a) estimates of each of the 12 fractile classes of MPCE for each of the States/ UTs are reliable, as per RSEs, (b) estimates of 'food group', 'energy', 'clothing and foot wear', are generally reliable when number of sample observations in a cell is more than 40, and (c) estimates of 'education and medicine', 'miscellaneous goods and services', 'durable goods', are not reliable even when the of sample observation in a cell is more than 40.

3.9 Based on the aforementioned inputs, the NSC felt that general standards (minimum) have to be laid down for all types of sample surveys.

Such standards cannot be survey specific and should not be left to be evolved after completing data processing in any survey. With regard to the issue of computing RSEs for each cell, it was felt that, even if efforts are made by organisations such as the NSSO to compute, it would not be possible to publish them at cell level, as it would make the tables unreadable and incomprehensible. Hence, such an attempt will frustrate the very objective of dissemination of data in a user friendly way. In view of this, it was felt that the SDRD may further study the sensitivity of RSEs (including design based calculations) with respect to sample size and the costs of computing RSEs.

Recommendations of the NSC

3.10 In view of the above, the NSC made the following recommendations:

(1) The following easily implementable minimum general standards may be laid down for sample surveys:

(a) RSEs and number of sample observations may be indicated in respect of marginal totals (rows and columns, as may be applicable) in each table.

(b) Cells with estimates based on sample observations less than 20 in number shall not be reported separately. In case, estimates in marginal totals are based on sample observations less than 20 in number, such rows and columns, as the case may be, shall not be reported separately.

(2) While the above minimum standards may be implemented straight away, the MOSPI may constitute an Expert Committee to evolve detailed standards on SDC in respect of micro-data and different types of tables.

3.11 The aforementioned recommendations were forwarded to the NSSO, *vide* communication no. 17(1)(77)/NSC/2015-16 dated 14th August, 2015.

(Action: MOSPI)

Ten year cycle for the NSS

3.12 The issue of deciding a ten-year cycle of subjects for the future NSS rounds was considered by the NSC in its 74th and 75th meetings. The officers of the FOD and the SDRD of the NSSO made presentations before the NSC in its 74th meeting.

3.13 The FOD, in their presentation, gave *inter alia* the details of the sanctioned strength and vacancies at JSO & SSO levels, norms of field work/supervision, and the number of persons available in the two levels with varying degree of experience. The SDRD, in their presentation, furnished *inter*

alia the demands on conducting surveys made by user Government agencies including the NITI Aayog.

3.14 In the 74th NSC meeting, -

- i) the NSSO was requested to obtain the latest position on the action taken by the Ministry of Tribal Affairs on the report, if any, submitted by the Expert Committee appointed by it, on data issues; and
- ii) the FOD was requested to work out month-wise details on the availability of manpower to take up team leader positions and supervisory positions to get as much field work as possible done through outsourcing.

3.15 In the 75th NSC meeting, it was stated that the report of the High Level Committee appointed by the Ministry of Tribal Affairs is still under the consideration of that Ministry, that the Committee did not have any primary survey conducted, but for the purpose of some of their conclusions and recommendations relied on the information/ data available from secondary sources, and that the communication from the Ministry of Tribal Affairs indicated requirements of a survey covering certain aspects, tribe-wise. The NSC noted that a similar request received from them was reviewed by the NSC in its 52nd meeting (held in July, 2012). In this meeting, the NSC desired *inter alia* that the Ministry of Tribal Affairs may look into the data available from the Censuses, the surveys such as those of the NSSO, the ORGI, and the Ministry of Health and Family Welfare, and other administrative sources and work out their requirements afresh, duly considering the sociological, cultural, economic and other aspects of tribes. Since, no response has been received from the Ministry of Tribal Affairs on these aspects, the NSC felt that no view could be taken on the current proposal of the Ministry.

3.16 The FOD, in their presentation in the 75th NSC meeting, provided *inter alia* a consolidated month-wise manpower statement for JSOs and SSOs, indicating requirements at different levels for items of work, being presently carried out.

3.17 Based on the inputs provided by the FOD, the NSC felt that more clarity will be required on certain items of work being carried out/ contemplated for the future. It was noted that the ICS scheme may undergo change, in the light of dialogue/ correspondence under progress with the Ministry of Agriculture. The UFS in the manner in which it was being carried out in the past, may not continue and it required rescheduling in the light of the recommendations made by the NSC earlier. NAD's 10 year requirements in respect of NSS also needs to be considered. Besides, there should be clarity on likely commencement of certain new activities such as PLFS, ASSS and TUS. If PLFS is to be launched, it will mean reconfiguration of the quinquennial CES-EU surveys and other surveys could be taken in lieu of that.

Recommendations of the NSC

3.18 In view of the above reasons, the NSC made the following recommendations:

- (1) The issue of ten-year cycle for NSS has been deferred.
- (2) The NSSO, in consultation with the concerned departments, may re-examine the whole issue of ten-year cycle in a holistic manner and place its findings/ suggestions before the NSC.
- (3) Special efforts be made during 2016-17 to update and digitize UFS frame.
- (4) Representation in the Standing Committee on UFS matters may be enhanced. The Committee may include membership from the NIC, the Department of Space and the ORGI.
- (5) The NSSO may report to the NSC, the revised schedule for completion of UFS.

3.19 The aforementioned recommendations were forwarded to the NSSO, *vide* communication no. 4(75)/2014-NSC dated 3rd June, 2015.

(Action: MOSPI)

Interim report of the Core Group on 72nd NSS Round

3.20 The NSS 72nd Round Working Group was constituted by the NSC in September, 2013 to *inter alia* -

- (a) evaluate the methodology for using shorter schedules in the NSS consumer expenditure survey; and
- (b) examine feasibility of preparing a Master Sample for use in future NSS rounds for facilitating integrated analysis of economic, social and demographic data including life of each master sample, common set of core items to be covered in every survey round to study data interrelationships and possibility of selecting overlapping samples in two or more surveys to provide for integration of data from the surveys.

3.21 A Core Group of experts of the Working Group has been entrusted with the above items of work. The Core Group submitted its interim report. The officers of the NSSO made a presentation on the report before the NSC in its 77th meeting. The salient points in the interim report and the presentation are given in the following paragraphs.

Methodology for using shorter schedules

3.22 In the NSS 72nd round, a full-year survey was undertaken using a pair of shorter schedules, namely, Schedule 1.61 and Schedule 1.62 on NSS Consumer Expenditure Survey along with the complete detailed Schedule 1.60, which is almost in the same form as the Schedule 1.0 (Type-II) used in the NSS 68th Round. In Schedule 1.61, food items (including cereals) are in details, whereas the non-food items (except clothing) are collected only as sub-group totals. In Schedule 1.62, food items (except cereals) are collected only as sub-group totals, whereas the non-food items (including clothing) are in details. In both the schedules, namely, Schedule 1.61 and Schedule 1.62, the cereal and clothing blocks are covered in detail. These blocks can be used as 'stitching blocks' between the two shorter schedules. The final recommendation of the Core Group will be made after testing the proposed methodology on the live data collected during NSS 72nd round.

3.23 The Core Group examined the adequacy of the sample size at State level, using NSS 66th round consumer expenditure (Schedule 1.0) data (for Bihar and West Bengal), and concluded *inter alia* that a minimum number of samples is required for reliable estimation of average MPCE for a State.

3.24 The Core Group did a separate study on developing methodology of splitting the Schedule 1.0 on Household Consumption Expenditure (Type II in NSS 68th Round) into two parts, on the basis of following criteria:

- (a) There should be a group of items or broad item-groups, like cereals, pulses and pulse products, etc., which should come in both the schedules in detail. These items should be so chosen that their consumption behavior is highly associated with all or most other items or broad item-groups. These items are called "Stitching Variables".
- (b) Without compromising the data requirement for different major users, the remaining broad item-groups are to be divided into two groups following some rule so that effective time of canvassing both the schedules in the field are almost same.

3.25 Based on a Correlation Matrix for 33 broad item-groups (same as broad item-groups of Schedule 1.0) calculated on the basis of NSS 68th round data (for States of Bihar & West Bengal) and the information on time actually taken to canvass each of these 33 broad item-groups in the on-going 72nd Round Schedule 1.60 (which is exactly same as Schedule 1.0 Type II in NSS 68th Round), an algorithm has been developed for splitting the schedule satisfying the above two points. The iterative algorithm (*at all-India X sector level and State X sector level*) was meant for improving upon the item group sub-totals so as to estimate the true MPCE of the households.

3.26 The aforementioned aspects will *inter alia* be further studied by the Core Group, before submitting its final report.

Preparation of master sample for use in future NSS rounds

3.27 The Core Group considered the following documents to form a view about stratification, keeping in view the core items and length of Master Sample (MS):

- Available frames in NSSO
- Primary Census Abstract 2011
- Economic Census data
- Urban Frame Survey
- Election Commissioner's Voter List
- Socio Economic and Caste Census data
- Regular and Ad-hoc SE Surveys (along with the sample designs) undertaken by NSSO during the last 10 years

3.28 The Core Group examined the feasibility of using EBs as MS frame units and found that hand drawn maps of EBs and Abridged House-Listing Schedules of census 2011 as used for Sixth EC are available and detailed EB level data and digitized maps of EBs are not available in the public domain. The Core Group recommended *inter alia* that, -

(a) 2011 Census EBs may be used as frame units of MS with effect from 2017, since collection of EB-wise details may take some time;

(b) formation of MS, based on EBs, may be taken up after procurement of EB-wise details;

(c) size of the MS will depend on the life of the MS and also on the subjects to be covered in different rounds, including the common set of core items;

(d) cost of preparation of MS Frame will depend on manpower requirement for identification of EB boundaries;

(e) care should be taken while designing the MS with special reference to slum and enterprise surveys;

(f) sample FSUs of NSS 72nd round, with fresh household selection, may be used as FSUs of MS for use in future NSS rounds till 2017; and

(g) current phase (2012-17) of updating UFS blocks may be discontinued.

3.29 The NSSO came up with some comments and alternative ideas in relation to the MS. The NSC noted the points made out in the Interim Report of the Core Group and the comments and suggestions of the NSSO on the report.

Recommendations of the NSC

3.30 The NSC felt that the issues could be considered in more detail after submission of final report by the Core Group. However, based on detailed deliberations made in the 77th NSC meeting, the NSC made the following recommendations:

- (1) In the study of shorter schedules, in particular, in the iterative algorithm, applying variance standard and/ or Kolmogorov-Smirnov test for convergence of iterations may also be considered. The study may consider more splits (particularly, in respect of non-food items) and inclusion of items of high variance as stitching variables. Revising the choice of stitching variables for smaller States may also be considered.
- (2) One of the objectives of Master sample is to generate inter-censal estimates on population and its characteristics. This has to be considered specifically.
- (3) The NSSO may obtain population census data (available at village/ward level in the Primary Census Abstract) and Economic Census data at EB level. The two data sets may be integrated and used in preparing Master sample for demographic and enterprise surveys of NSS.
- (4) The NSSO may place its comments and ideas on alternative designs as also the above suggestions, before the Core Group.
- (5) The issue of a Master sample for enterprise surveys has yet to be addressed by the Core Group and alternative arrangements may need to be made, if necessary.

3.31 The aforementioned recommendations were forwarded to the NSSO, *vide* communication no. 17(1)(77)/NSC/2015-16 dated 14th August, 2015.

(Action: MOSPI)

Tabulation plan and estimation procedure for 72nd NSS Round

3.32 The draft tabulation plan and estimation procedure for the NSS 72nd NSS round (survey period: July, 2014 to June, 2015), formulated by the Working Group, was placed before the NSC in its 78th meeting.

Recommendations of the NSC

3.33 The NSC approved the draft tabulation plan and estimation procedure for the NSS 72nd round, with the following changes/ observations:

- (1) Tables on tourism characteristics may be generated separately for the reference period of 365 days and 30 days, in accordance with the manner in which the reference period has been used in data

collection. In other words, there is no need to inflate the data collected for a reference period of 30 days to obtain an estimate for 365 days and *vice versa*.

- (2) It was reported that information on Special Domestic trip was collected as per the specific requirement of the Ministry of Tourism and that quality of this data cannot be ascertained through validation. Hence, the tables and indicators generated from this information may be placed before the Working Group for its recommendations on whether to include them in the reports of the survey.

3.34 The aforementioned recommendations were forwarded to the NSSO, *vide* communication no. 17(1)(78)/NSC/2015-16 dated 15th October, 2015.

(Action: MOSPI)

Survey instruments for the 73rd NSS round

3.35 The 73rd NSS round is devoted to a survey on 'Unincorporated Non-agricultural Enterprises (excluding 'construction'), which is a follow-up survey of the Sixth Economic Census. The field operations commenced from 1st July 2015.

3.36 The coverage of the 73rd NSS round is similar to that of 67th NSS round with a few changes. The 73rd round Working Group, after conducting the Training of Trainers, finalised the survey instruments containing detailed sampling methodology, concepts and definitions, related instructions, and schedules of inquiry for the 73rd round.

Recommendations of the NSC

3.37 The survey instruments formulated by the 73rd NSS Round Working Group were presented before the NSC by the officers of the NSSO in the 78th NSC meeting. The NSC approved the survey instruments formulated by the Working Group.

3.38 The aforementioned recommendations were forwarded to the NSSO, *vide* communication no. 17(1)(78)/NSC/2015-16 dated 15th October, 2015.

(Action: NSSO)

Subject coverage for the 74th NSS Round

3.39 Various options for coverage in the 74th NSS round proposed by the SDRD were considered by the NSC. The officers of the CSO suggested that a follow-up survey using the list frame of the VI Economic Census may be planned as early as possible, before the frame gets outdated.

3.40 The NSC, in its 75th meeting, decided that the 74th NSS Round would be an establishment focused survey on services sector, which would form a

prelude to the Annual Survey on Services Sector (ASSS). It was also decided that the 74th round would be devoted to a survey using list frame of the Sixth Economic Census, to check its accuracy and update it, and to canvass, after incorporating necessary improvisations, the schedule prepared by the CSO (ESD) for the ASSS using the updated frame, as per the sampling design to be evolved.

3.41 The issue of constituting 74th NSS Round Working Group was discussed in the 78th NSC meeting. As per the decisions taken in this meeting, a Working Group for the 74th NSS Round was constituted, *vide* MOSPI Order no. 8/65/2010-NSC dated 19th October, 2015, under the chairmanship of Dr. Arvind Subramanian, Chief Economic Adviser to formulate methodology etc., for the round. The Working Group has been functioning.

(For information)

Interim Report of the Standing Committee on Labour Force Statistics and implementation of CAPI

3.42 The NSSO submitted the following two reports and presented the reports for consideration by the NSC in its 80th meeting:

- (i) Interim Report of the Standing Committee on Labour Force Statistics (SCLFS) on formulation of sampling design and structuring the schedule of enquiry for the Periodic Labour Force Survey (PLFS)
- (ii) Report on the pilot testing of WB CAPI solution for collecting PLFS data using hand-held device

(i) Interim Report of the SCLFS:

3.43 With regard to the sampling design for PLFS, earlier the Amitabh Kundu committee (2009) recommended *inter alia* rotational sampling scheme, where 25% of the sample FSUs of a quarter are to be replaced in the next quarter. The SCLFS noted that regression estimates of the labour force indicators derived from the rotational panel survey (Kundu committee's methodology) suffered from three shortcomings as outlined below:

- (a) Negative estimates of some parameters based on regression in some small domains
- (b) Higher variance of the change estimates for the relevant parameters due to partial match of units in successive panels
- (c) Non-additivity of estimates for a particular quarter using regression in respect of different domains (like male, female and person total, etc.)

3.44 Keeping in mind the disadvantages of the rotational panel survey, an alternative sampling design, as detailed below, was *inter alia* recommended by the SCLFS for adoption in the PLFS.

(1) A fixed panel of households from a fixed panel of first stage units (FSUs) will be surveyed and independent estimates will be used for each quarter separately. This would eliminate the possibility of negative estimates.

(2) The sampling design should take care of quarterly estimates of labour force indicators based on current weekly activity status and annual estimates of the same based on usual activity status for both the rural and the urban areas.

(3) To generate quarterly estimates of change parameter, current weekly status particulars will be captured in a fixed set of households selected from a fixed panel of urban FSUs (divided into 4 groups, namely, P_1 , P_2 , P_3 and P_4 , called sub-panels) in each quarter of an year with perfect matching (overlapping) between any two quarters. Since yearly change in the coverage of urban area is very small, the panel may continue for 3 years (i.e. total 12 quarters or 36 months). After 3 years, another fixed panel of urban FSUs will be selected afresh from the updated sampling frames.

(4) Generation of Annual Estimates of labour force indicators should ensure capture of usual activity particulars as well as growth in population characteristics. To achieve this, fresh listing of households will be done to find out addition/ exit of households in the sample FSUs, and usual activity particulars will be collected from sub-panel P_1 in Q1, P_2 in Q2, P_3 in Q3 and P_4 in Q4 for both rural and urban areas.

(5) In both rural and urban areas, quarterly estimates in the current weekly activity status will be given separately for all the quarters of a year. There is no justification in combining the four quarterly estimates into a single yearly estimate in current weekly status, as is being done now. So the yearly estimates in current weekly status will not be given.

(6) In the urban areas, from 2nd to 12th quarters, estimates of change parameters in the current weekly activity status will be given. The same between 12th and 13th quarter can be given with a higher variance, as there would be no overlap of observations since a fresh sub-panel will be selected in the 13th quarter from an updated frame. Hence, this would be based on the assumption that the change in population is negligible. This problem existed in the rotation panel also.

3.45 The NSC considered the above sampling design recommended by the SCLFS and felt that the deficiencies noticed in regression estimators may still persist in the fixed panel design, if the same estimation procedure is adopted.

Besides, the fixed panel design has the disadvantage of keeping the same set of households for survey for three years, which may pose problems in urban areas, due to shifting of household members. A trace of this problem has already been seen in the pilot. Moreover, there are also other factors, such as updation of urban frame and notification of new urban areas resulting in changes in rural frame, which happen between censuses and complete change of rural and urban frames when new census data becomes available (next census data is likely to be available by 2023-24), which need to be carefully considered. Most importantly, the fixed panel design induces discontinuity in what is conceived to be quarterly series, when the panel changes. It also requires more manpower compared to the rotational panel design and creates more logistical, administrative and financial problems. Looking at the situation holistically, it appears that the sampling design recommended by Kundu committee has lesser disadvantages from the field point of view.

3.46 Results of pilot survey conducted in urban sector, on the basis of methodology recommended by the Kundu committee, showed divergence in respect of Proportion Unemployed (PU) over the different sub-rounds of quinquennial Employment-Unemployment survey (EUS) of NSSO.

3.47 In order to see whether schedule designing of PLFS has any impact on the divergence in the estimates of PU between PLFS and EUS, three types of schedules were canvassed for the 7th and 8th quarter of PLFS (Pilot):

- Schedule 10.1 (PLFS schedule recommended by NSC Committee on PLFS where weekly activity status of a person was decided through 2 items),
- Schedule 10.2 (schedule in the line of collecting employment-unemployment particulars followed in annual rounds of Schedule 1.0 by assigning weekly activity status of a person directly in a single item),
- Schedule 10.3 (schedule in the line of employment-unemployment schedule of quinquennial rounds of NSSO where weekly activity status of a person is decided based on the daily activity status collected for each day of the reference week).

3.48 It was observed that among the three types of schedules of PLFS, Schedule 10.3 gives estimates of LFPR, WPR, PU and UR almost of the same dimension of the corresponding estimates of the quinquennial EUS of NSSO.

3.49 With regard to the schedules, the SCLFS considered the basic structure of Schedule 10.3 canvassed in 7th and 8th quarter of PLFS pilot and made necessary modifications in it for adoption in PLFS (termed as schedule 10.4) after considering the requirements of National Skill Development Agency (NSDA), National Accounts Division (NAD), etc. The SCLFS recommended *inter alia* as follows:

(i) Provision in the schedule of inquiry was made for collection of information on usual status from each of the household members, in line with the quinquennial survey of employment and unemployment.

(ii) To have an idea of the extent of underemployment, on each day of the reference week, when a person had work activities, information on hours available for additional work will be collected.

(iii) To have an idea about the different work activities performed by a person in each of the days of the reference week, on each day for at most two work activities, information will be collected on hours of work, 2-digit NIC code, 3-digit NCO code, wage/ salary (received/ receivable) for the work done as casual labour and regular wage/ salaried work along with total hours worked for the day.

(iv) To accommodate the requirements of NSDA and NAD, information on some aspects of vocational/ technical training will be collected for persons of age 12-59 years and details of enterprise type codes for 'Government/ public sector' will be split further for collection of information from the workers in usual status.

(v) Collection of information on net earnings from self-employment activity through a single-shot question would be difficult and as such it has been dropped from the Schedule.

(vi) The Committee noted the importance of additional data requirements of contract labour, skill development, earnings of self-employed, etc., but felt that it will not be wise to overburden the core labour force module at this stage. Such topics may be taken up one in each year as a module in the core labour force Schedule.

(ii) Implementation of CAPI:

3.50 With regard to the report on the pilot testing of WB CAPI solution submitted by the Group of NSSO Officers, the NSC noted that the objective of the pilot was to *inter alia* assess the amenability of new technology in PLFS surveys keeping in-view the present environment and cultural behaviour for adopting new technology in the field vis-a-vis comfort-level of the NSSO investigators/respondents in using the client interface for data collection. It was also noted that on the basis of feedback report of DPD and FOD on pilot testing of the solution in 9 field offices of three states, namely, Himachal Pradesh, Gujarat and Odisha, the Group recommended using WB CAPI solution in nation-wide survey. The Group also brought out factors that need to be controlled/ taken care of, while using the solution.

Recommendations of the NSC

3.51 On the basis of the aforementioned inputs and detailed deliberations in the meeting, the NSC recommended as follows:

(1) The NSC did not agree with the interim recommendation of the SCLFS on fixed panel design. Instead of changing the sampling design altogether; the NSC desired that rotational panel design with design based estimates may be retained. The first visit data under this design would be a replica of the regular EUS framework of the NSSO. It also facilitates generation of Annual estimates. Moreover, under the usual field conditions, particularly in the urban sector, the assumption made in the fixed panel design that households would be fixed for a period of three years seems to be a strong and unreasonable assumption. In view of this, the NSC desired that the SCLFS may be informed accordingly and consider other design issues in this light.

(2) The NSC approved the recommendations of the SCLFS with regard to the schedules of inquiry, subject to the following changes/suggestions:

(i) Details to be collected on vocational/ technical training for persons of age group 12-59 years may be taken out from the demographic particulars block of the schedule and placed in a separate block. Its continuation in the schedule may be reviewed every year, depending on its use and the relevant items may be deleted/ dropped if they are not required in any year.

(ii) The item 'number of years in formal education' needs to be included in the demographic particulars block of the schedule, as this information is important in the context of SDG indicators. The current question may be continued provided that the instruction to the field staff makes it clear that the level of last class attended be recorded and not just completion of a stage of schooling (5th pass, 8th pass, etc.).

(iii) Appropriate instructions may be incorporated in the Instruction Manual to guide the field functionaries on the quarters of each year in which data on usual principal and usual subsidiary economic activity particulars of household members are to be collected.

(iv) In the block on current weekly activity particulars, -

(a) Information on 3-digit NCO code for each work activity for each day need not be collected. It would be

sufficient to collect the information as a single item for the entire reference week.

(b) Information on wage/ salary earnings for the work on each day may be collected only for the 'work activity status' codes relating to casual labour. For regular wage/ salaried persons, earnings during the preceding calendar month corresponding to that regular wage/ salaried work may be collected as a single item. For self-employed persons, information on gross earnings during last 30 days from the self-employment activity may be collected, which could be used as a classificatory variable.

(v) Appropriate changes in the schedules may be made on the basis of sampling design finalised.

(3) The NSSO may bring out a dissemination plan on tables and unit-level data. The NSSO may convene data user conferences periodically for reviewing the dissemination plan from time to time.

(4) The NSC considered the report on the pilot testing of WB CAPI solution and recommended that the solution may be adopted for the PLFS for which the NSSO may take timely action to obtain necessary financial and administrative approvals.

3.52 The aforementioned recommendations were forwarded to the NSSO, *vide* communication no. 17(1)(80)/NSC/2015-16 dated 21st January, 2016.

(Action: MOSPI)

Progress/ status of various statistical activities and initiatives of NSSO

3.53 The DG, NSSO made a presentation before the NSC in its 76th meeting on the progress/ status of various statistical activities and initiatives of the NSSO. Details of progress achieved till the end of May 2015 in respect of on-going surveys were furnished during the presentation. Latest status, in respect of the role being played by the NSSO in some new activities, such as Drug abuse survey, Annual survey of services sector, Time Use survey, Periodic Labour Force Survey, pooling of State and Central samples in the NSS, digitization of UFS maps, integration of UFS with Census EBs, Use of modern Information Technology in data collection/ preparation, steps taken in reducing time lag in release of results, pilot testing of CAPI software, and creation of appropriate statistical framework under Swachh Bharat Mission was also reported in the meeting.

3.54 It was reported in the meeting that the process of achieving ISO 2008: 9001 standard in quality of performance has been initiated in the NSSO

(SDRD) and that the SDRD expects that the certificate will be awarded to them soon.

3.55 With regard to the drug abuse survey, it was stated in the meeting, that the report of the Working Group containing proposed methodology for pilot testing was approved by the Chairperson, NSC. It was also reported during discussions that the pilot household survey on estimation of household income, savings and investment was not a success.

3.56 Subsequently, the NSC reviewed Quarterly reports submitted by the NSSO in its 79th and 82nd meetings and noted the progress/ status of various statistical activities and initiatives furnished thereon by the NSSO.

Recommendations of the NSC

3.57 Based on the quarterly reviews, the NSC made the following recommendations:

(1) The NSSO may continue furnishing quarterly reports to the NSC on the progress/ status of various statistical activities and initiatives.

(2) The report of the Expert Group on methodology for the pilot household survey on estimation of household income, savings and investment along with suggestions on alternative approaches may be placed before the NSC for review.

(3) The report of the 72nd NSS Round Working Group on feasibility of master sample may be expedited.

(4) The NSSO may review its manual on pooling of Central and State NSS samples on the basis of experience gained and success achieved so far and the comments/ suggestions received on the manual. The manual should include relevant algorithms to be more user-friendly.

(5) The methodology to be adopted in the proposed PLFS should include providing inputs necessary in the context of recent methodological change in respect of services sector in compilation of national accounts, wherein labour-input method has been introduced. In view of this, the NSSO may obtain the requirements from the NAD and place them along with their views before the Standing Committee on Labour Force Statistics (SCLFS). NSC will take a call on this, on the basis of the report of the SCLFS.

(6) The NSSO, in particular the SDRD which is going for ISO certification, may maintain and periodically update a manual containing induction material, for use as reference material by the officers/ staff presently working and by the new comers.

(7) Reports on the seminars/ workshops conducted from time to time may be circulated to NSC members.

3.58 The aforementioned recommendations were forwarded to the NSSO, *vide* communication no. 4(76)/2014-NSC dated 27th July, 2015.

(Action: NSSO)

Chapter-4

Review of statistical activities of other Central Ministries

4.1 During the period under report, the NSC reviewed a number of statistical activities being carried out in various Ministries/ Departments, other than the MOSPI. The MOSPI has been collaborating with the Ministries/ Departments, in some of the activities. Details of the review are given in the following paragraphs.

Land Use Classification

4.2 On the basis of the recommendations of the Rangarajan Commission (2001), the Department of Agriculture and Cooperation (DAC), after consultation with the States, made a proposal to give a direction to the States, for introducing three new categories to enhance the nine-fold land use classification to twelve-fold one in their land records formats for ensuring regular data flow. The three new categories, namely, land under social forestry, land under water bodies, water logged land & marshy land, are proposed to be included in 'Area under Non Agricultural Uses' by way of sub-categorisation in the nine-fold classification. The Ministry of Environment, Forests & Climate Change (MOEF), *vide* their DO letter no. 8/3/2014/STAT/2 dated 18-2-2015, proposed *inter alia* to further enhance the classification to identify degraded areas.

4.3 The NSC considered a note, submitted by its Secretariat, explaining the land use classifications in use in the States, in the National Remote Sensing Agency (NRSA), and in the Department of Land Resources (DOLR) as also the land use and land cover classifications prescribed as international standards under the System of Environmental Economic Accounts (SEEA).

4.4 The issues relating to land use classification were considered by the NSC in its 74th meeting. The DDG, NSC Secretariat and the officers of the NRSA made presentations before the NSC in the meeting.

4.5 Based on the inputs provided and the presentations made, the NSC noted *inter alia* that it is not possible to arrive at one-to-one correspondence among the entries in the existing classifications, that it may be possible to understand the subtle differences in the entries and accordingly, provide for sub-categorisations to eventually enlarge the nine-fold classification in a manner that all user requirements could be met, including the adaptation of SEEA classification in India. The NSC also felt that any proposal to enhance the work-load of a Patwari is not encouraged by the deteriorating situation in the field during the past over two decades.

4.6 In addition to the above, there is a need to standardise a classification with adequate coverage and definitional clarity, identify appropriate official sources who could ensure data flow in accordance with the classification (wholly or in part), take up reconciliation including ground-truthing in respect of data flows where appropriate, and explore the possibility of integrating data emanating from different sources in a manner that comparability with the nine-fold classification could be continued. It was recognized that land-use statistics based on land use classification has to be evolved as a source of statistics beyond the scope of agriculture sector.

Recommendations of the NSC

4.7 Keeping in view the aforementioned facts and issues, the NSC recommended that, -

(1) the MOSPI may constitute an Expert Group to make a detailed examination and provide advice within six months;

(2) the officers of the CSO (NAD), CSO (SSD), the DAC, the DOLR, the NRSA, the MOEFC and representatives of a few States may be included in the Group; and

(3) non-official members to be included in the Group may be decided with the approval of the Chairperson, NSC.

4.8 The aforementioned recommendations were forwarded to all the concerned offices, *vide* communication no. 4(74)/2014-NSC dated 20th April, 2015.

(Action: DAC, MOSPI)

Statistics on Education

4.9 At the instance of the NSC, the CSO (SSD) invited a theme paper on educational statistics. The theme paper titled "Statistics on Education" was authored by Dr. J.B.G. Tilak, Dr. P.R. Panchamukhi and Dr. K. Biswal. On the basis of the theme paper, the CSO (SSD) prepared a Discussion paper, after consulting the Ministry of Human Resource Development (MHRD). Both the papers were considered by the NSC in its 78th meeting. The officers of the CSO (SSD) made a presentation on the papers before the NSC in its 78th meeting.

4.10 The points of action recommended in the theme paper include the following:

(1) There is need for co-ordination between several agencies that collect educational statistics. Co-ordination should be made by a nodal organisation as recommended by the Sathyam Committee, i.e. by establishing a National Commission on Educational Statistics/National Centre for Educational

Statistics. This would not only resolve several problems relating to coverage, comparability and relevance of educational statistics currently collected by multiple agencies.

(2) The main responsibility of collecting the statistics should lie with the Government, but the responsibility of collating the available (once published) information, and constructing the time-series information, etc., could be given to research institutions.

(3) A 'core information framework' should be developed, on which there cannot be any compromise in the quality, reliability, and timely publication. The core framework should include almost all details that are essential for efficient planning and for good policy relevant research. It should provide micro level specificities, along with macro level aggregate picture.

(4) Core information may consist of two parts. One kind of information may have to be collected every year, and from every educational institution on a census basis. The second kind of information (e.g., socio-economic profile of students, household expenditures on education, and levels of achievement of pupils) may have to be collected on a regular basis, not necessarily every year, may be on a sample basis, and the source of information may be households/education institutions.

(5) Government should take the responsibility of collecting, processing and publishing at least the statistics relating to the core information framework efficiently in time. A filtering system in the use and dissemination of educational statistics from district to state and national levels may be adopted in system for data management, particularly in school education.

(6) The most important gaps identified in the present educational statistics, that may fall into the 'core information framework' are: (a) attendance of the students, (b) income and expenditures and related information of government, aided and unaided private schools, (c) statistics on utilisation of financial and physical resources in education, (d) learning achievement levels of students by management and location of the school, and by grade, sex, social category, etc. of pupils, (e) socio-economic background of the students, and (f) students'/households' expenditure on education.

(7) The National Sample Survey Organisation may be required to collect statistics on socio-economic background of the students, household expenditure on education etc., on a more regular basis, at regular intervals, and in more details.

(8) One of the important items on which information needs to be collected, is information on 'formal' unrecognised schools/ institutions for higher education and the database on the 'total' education system in the country will not be complete without such information. Other items refer to non-formal and adult education, open schools, etc., on which systematic data are not collected.

(9) Another important set of indicators on which data need to be collected refers to quality in schooling facilities, availability of text books to the students, including the time of availability, number of text books available in each class, availability of teacher-guides, etc. Such information may, however, be collected by the National Council of Educational Research and Training in its *All-India Educational Surveys* and by the MHRD through its designated Technical Support Groups of large scale school education reform programmes.

(10) To reduce the gap in collection of statistics, system level improvements have to be made. Institutions may be required to maintain records giving detailed statistics (as they maintain statistics on enrolment of Scheduled Castes/ Tribes), for the latest 2-3 years.

(11) Putting in place an online system of data collection and management would reduce time lag drastically besides promoting effective and sustainable decentralisation including fiscal decentralisation in education.

(12) With respect to publication and dissemination, it may be necessary that hard (paper) copies are made available, along with CD-ROMS and online data files in dbase and EXCEL.

(13) All principal agencies involved in collecting/ processing/ publishing/ disseminating educational statistics need to be represented in the high power Standing Committee on Educational Statistics.

(14) It may be desirable to organise, at regular intervals, meetings of educational data suppliers and educational data users. Since the Government itself is the data supplier and data user in respect of many aspects of educational policy making, it would be useful if concerned departments reveal how actually the data are used.

(15) It is desirable to initiate steps to establish a data bank to compile and critically edit scattered data systematically in one place according to major issues of education and bring out trend reports at regular intervals.

(16) There is a need to integrate planning and data collection. Unless data collection is made an integral part of planning process, the procedure for collection may not improve. The complexity of the formats for data collection and the existence of weak machinery for data collection at the state level delay the flow of information. Provisions for training on a regular basis can improve the collection of educational statistics.

4.11 The Discussion paper of the CSO (SSD) highlighted a few other issues needing attention, as detailed below:

(1) In view of the fact that MHRD has stopped disseminating school education statistics after 2011-12, the only regular source providing annual statistics on

school education now is U-DISE which is yet to be given status of official statistics. Efforts need to be made to put in place a mechanism for regular checks of quality of its data to enhance its reliability.

(2) In the present system of collection of data, achievement levels in different grades are not captured. A suitable sampling methodology may be devised to conduct sample studies at regular intervals so that progress towards qualitative improvements can be studied.

(3) Under U-DISE, an attempt may be made to prepare the directory of schools, and schools should be given a unique code so that under coverage in a particular year is known.

(4) Statistics Division in the MHRD should take the responsibility of monitoring the quality and publishing school education statistics as recommended by Govinda Committee.

(5) At present there does not exist any mechanism for grading or ranking of institutes of higher education. In various countries, student satisfaction surveys are conducted which are very helpful in ranking the institutes. There is a need to make efforts in this direction. If need be a few pilot studies may be planned.

(6) Provisions under the Collection of Statistics Act, 2008 may be invoked to increase the response from institutions in surveys on educational statistics undertaken by MHRD or other agencies.

4.12 The Statistics Division in the MHRD pointed out *inter alia* that:

(1) Under U-DISE, the colleges where class 11th and 12th are taught are being left-out. Neither the number of such colleges nor their coverage is known. It is resulting in underestimation of enrolment in these classes.

(2) There is a complete lack of availability of dedicated professionally trained statistical personnel at State/ District levels to look into the collection of data and its quality from schools and institutions of higher education.

(3) Quality of higher education data being collected through portal mode and its timeliness largely depends on regulatory framework of regulators such as the UGC and the AICTE.

(4) Taking responsibility of monitoring the quality of publishing school education statistics by the Statistics Division is not workable and the matter is under consideration.

4.13 Some of the queries/ concerns raised during the deliberations in the 78th NSC meeting are as follows:

- (1) What are the timelines for surveys like All India Survey on Higher Education (AISHE), All India School Education Survey (AISES) of NCERT, U-DISE survey of NUEPA for collection of data and bringing out reports/ unit-level data, etc?
- (2) Whether there are cut-off dates for receipt of data and whether Reports are revised to include data received after cut-off date?
- (3) Whether unit-level data on education sector is in the public domain?
- (4) Is there any fixed periodicity for All India School Education Surveys?
- (5) Do the education surveys, particularly the AISHE, the AISES, etc. are carried out under any regulatory mechanism or for any regulatory purpose or can they be done under the Collection of Statistics Act, 2008 to ensure quality, better response and timeliness?
- (6) In AISHE, the definition of Stand Alone Institutions needs clarity. For instance, whether NIITs, institutes under M/o Skill Development and D/o Electronics accredited institutes are covered? It would be better if exclusions could be clearly indicated. The coverage in the Frame needs clarity.
- (7) Are the definitions of AISHE in congruence with those used by UNESCO Institute for Statistics (negative list approach)?
- (8) Does MHRD certify/ authenticate the data of U-DISE or AISES for official purposes, i.e., school statistics that are used by the MHRD for policy formulation, supply of data to International agencies (for example, UNESCO). Whether different agencies in the country have been permitted to directly supply data to International agencies?
- (9) Whether the MHRD publication "Analysis of Budgeted Expenditure on Education" contains expenditure on education made by Ministries other than MHRD also? Whether the budget analysis is consistent with the approach followed by the CSO (NAD)?

4.14 The MOSPI circulated a 'Compendium on Core Functions' for guidance and compliance by Central Ministries handling statistical functions. The functions need to be mapped with the recommendations given in the Theme Paper and the Discussion Paper, keeping in view the queries/ concerns stated above. The NSC desired in its 78th meeting that the MHRD may place the relevant inputs on these lines before the NSC.

4.15 The MHRD furnished a note containing replies to the above queries as also other issues for consideration by the NSC in its 79th meeting. The Officers of the MHRD participated in the deliberations in the meeting.

4.16 The NSC noted the points given in the material furnished by the MHRD. It was found that the MHRD is not directly involved in data collection in many cases, but it uses data/ reports prepared by other agencies for fulfilling its official obligations. This was confirmed by the officers of the MHRD, who participated in the 79th NSC meeting. Since the data/ reports are being used for official purposes, they have acquired the de facto status of official statistics.

Recommendations of the NSC

4.17 In view of the above, the NSC made the following recommendations:

(1) It was stated that the analysis of budget expenditure on education covers expenditure on education by all the Ministries and State Governments. The CSO (NAD) is requested to take up an exercise to check the consistency between the approaches followed by the MHRD and the CSO (NAD).

(2) The recommendations in the Theme Paper and the Discussion Paper may be considered by the MHRD in an appropriate way for implementation.

(3) The MHRD may evolve a holistic approach for regular data collection on education sector. It was suggested that Higher Education Institutions may be covered on census basis, that recognized/ registered School Education Institutions may also be covered on census basis and that unrecognized/ unregistered School Education Institutions may be covered on sample basis. The MHRD may prepare a list frame for all the three components. For preparing the frame on unrecognized/ unregistered School Education Institutions, Economic Census data may be used. The MHRD may also consider having the data collection under the provisions of the Collection of Statistics Act, 2008, where necessary and effective, to improve compliance.

(4) In the existing system, it appears that the MHRD does not have any control on the quality of data. Hence, it is suggested that the MHRD may evolve a system of statistical audit on the quality of data, through sample checks etc.

4.18 The aforementioned recommendations were forwarded to the MHRD and the CSO (NAD), *vide* communication no. 17(1)(79)/NSC/2015-16 dated 28th December, 2015.

[Action: MHRD, MOSPI]

Index of Service Production (ISP) and Service Price Index (SPI)

4.19 The Office of the Economic Adviser (OEA), under the Department of Industrial Policy and Promotion (DIPP), submitted a note on Development of Index of Service Production (ISP) and Service Price Index (SPI). The Officers of the OEA made a presentation in the 79th NSC meeting. Prof. Biswanath Goldar (former Member, NSC), who was a member of the Expert Committee on Development of Business Service Price Index also participated in the discussions.

4.20 A host of issues mainly relating to data availability and data flow in different sub-sectors of the services sector were flagged by the OEA Officers during their presentation. The OEA stated *inter alia* in their note as follows:

- (a) The OEA has identified ten sectors in the initial phase of the development of experimental business SPI. Out of the ten services,

OEA is compiling experimental SPIs for Rail Transport Services, Postal Services, Telecommunication (Cellular) Services on continuous basis and these are based on the data supplied by the Railway Board, Department of Posts and Telecom Regulatory Authority of India respectively.

- (b) Experimental SPI for Banking Services is compiled by the RBI and is uploaded by OEA on its website.
- (c) The Air Service Price index has been developed on the basis of data from various airlines collected through Directorate General of Civil Aviation (DGCA) and efforts are being made to update the index through continuous flow of required data.
- (d) A sub-committee under the Chairmanship of Executive Director, Insurance Regulatory and Development Authority, Hyderabad is working on development of experimental SPI of Insurance Service.
- (e) Transport Research Wing (TRW) of M/o Road Transport and Highways is in the process of developing the experimental SPI for Port Service. Efforts are being made to develop Road Transport (Freight) Service Price Index with the help of TRW, M/o Road Transport & Highways. Efforts are also being made to procure the required data for the road transport index but there does not seem to be any source of organised data for the sector.
- (f) The methodology finalised by the Expert Committee on development of SPI suggests primary data collection for compilation of the index. However, considering the limitations in collection of primary data, attempts are being made by the OEA to identify secondary sources for compilation of index.
- (g) Comparing the coverage of services under the SPI and the ISP (compiled by CSO), it was noticed that CSO does not cover the Road transport (Freight) Service, Trade Services and Business Services whereas OEA does not cover the Health Services and Education Services.
- (h) The level of NIC classification of services that needs to be considered for the indices has to be firmed up.
- (i) In the 68th NSC meeting (July, 2014), it was decided that the indices for each component/ sub-sector of ISP may be compiled and released by the concerned line Ministries after formulation of the appropriate methodology. However, there was no such decision in respect of SPI.

- (j) An integrated approach needs to be followed in evolving the methodologies for the Service Production Index and the Service Price Index.

Recommendations of the NSC

4.21 The NSC noted the aforementioned issues and made the following recommendations:

- (1) Need for integration of approaches, to be followed in respect of all the statistical products on services sector, needs no emphasis. In particular, such integrated approach, which conforms to National Accounts framework, is desirable in respect of indices, being produced by different agencies on the sector. All methodological and data issues may be placed before the Standing Committee on Services Sector.
- (2) In cases where it is difficult to compile service price index due to data availability constraints and the wage component is very high, the feasibility of compiling wage index as a proxy or an indirect measure may be considered.
- (3) With regard to data flow, there is a need to lay down the requirements along with specifications. Source official agencies to be made responsible for data flow may be identified and methodological guidance may be provided to them to produce indices for the respective sub-sectors.
- (4) Use of modern Information Technology, particularly in cases where on-line marketing is common, may be considered for effective data collection on price quotations.

4.22 The aforementioned recommendations were forwarded to the OEA, *vide* communication no. 17(1)(79)/NSC/2015-16 dated 28th December, 2015.

(Action: DIPP)

Comprehensive National Nutrition Survey

4.23 The Ministry of Health and Family Welfare (MOHFW), *vide* their letter no. Z.28020/38/2014-CH dated 18-12-2015, submitted a proposal for consideration by the NSC. The proposal relates to survey protocols and questionnaires developed by a Technical Advisory Committee (TAC), constituted by the MOHFW, for conducting Comprehensive National Nutrition Survey (CNNS) by the MOHFW in partnership with the UNICEF. Officers deputed by the MOHFW made a presentation before the NSC in its 81st meeting. The comments furnished by Dr. Rajiv Mehta, Member, NSC on the proposal were also discussed in the meeting.

4.24 The proposal was considered by the NSC, in accordance with the instructions contained in the 'Guidelines on conducting statistical surveys', notified by the MOSPI, *vide* Notification No. 232 dated 5th December 2011 published in the Gazette of India Extraordinary Part-III Section-4. From the proposal submitted, it was noted that the MOHFW constituted the TAC without consulting the NSC. The certificate of the Nodal Officer, as prescribed under the Collection of Statistics Rules, 2011, was also not submitted along with the proposal.

4.25 From the the material furnished by the MOHFW and the presentations made in the 81st NSC meeting, the NSC noted *inter alia* the following points:

- (1) The purpose of the CNNS is to conduct a nationally representative and comprehensive nutritional profiling of preschoolers (0-4 years), school-age children (5-9 years) and adolescents (10-19 years) to quantify the true malnutrition burden to serve as a baseline. The proposed survey will be implemented by four survey agencies, one main laboratory, two quality control laboratories and a lead agency.
- (2) The specific objectives of the survey are: (a) to assess the prevalence of biomarkers of important micronutrient deficiencies, subclinical inflammation and soil transmitted helminthes infections among children and adolescents, (b) to assess the prevalence of overweight and obesity, along with information on body composition, cardio-metabolic risk, muscular strength and fitness among school-age children and adolescents and (c) to explore the associations between the nutritional profile of children and adolescents and their health status, cognitive development, school readiness, educational outcomes and various important determinants such as environmental conditions and dietary diversity.
- (3) CNNS will, for the first time, determine the magnitude of over-nutrition and associated non-communicable diseases among school-age children and adolescents in India, which will serve as the baseline to evaluate the Rashtriya Kishor Swasthya Karyakram programme, and ultimately help re-orient national policy to address the issues of nutrition transition.
- (4) The CNNS will be conducted in 1,885 primary sampling units (PSUs) covering both rural and urban areas of 30 States by interviewing a total of 1,13,100 children and adolescents (total sample size for households Survey: 113,100 children 0-19 years & total sample size for biomarkers: 56,550 children 0-19 years). The final adjusted sample size for the household survey, and anthropometric and body composition measurements will consist of 37,700 participants in each of the three target age groups,

namely, preschoolers (0-4 years), school-age children (5-9 years) and adolescents (10-19 years). The proposed sample size will (i) ensure a minimum of 500 rural and 500 urban respondents in all the States; (ii) include a larger sample from Delhi to provide slum and non-slum differentials; and (iii) include a larger sample from Uttar Pradesh to provide regional estimates for three regions – Eastern Uttar Pradesh, Western Uttar Pradesh and Bundelkhand.

- (5) CNNS will adopt a two-stage sample design in rural areas and a three-stage sample design in urban areas. Census villages/ census EBs (in urban) [after grouping to ensure a minimum of 150 households] after suitable stratification will be PSUs and households having the target population will be Second Stage Units (SSUs). House listing will be carried out in the PSUs to select individual households from the list of eligible households using systematic random sampling.
- (6) During household listing, households with members between 0-19 years will be classified into three strata (0-4 years, 5-9 years and 10-19 years). From each stratum, 20 households will be selected using systematic sampling, and within each household only one eligible respondent will be selected using a KISH table. Some households may have eligible participants from more than one age group, allowing two or three participants to be interviewed.
- (7) In the household listing form, information on the village including the current population, estimated number of residential households, head of the village and basic infrastructure such as schools, health centres and road connectivity, and detailed information on each household, such as the location of the house, head of the household and availability of eligible respondents for interview, will *inter alia* be collected.
- (8) In order to facilitate operational planning and management of the survey, the country will be divided into four zones with each zone covering 7-8 States. The survey will be carried out in all four zones simultaneously over the course of 14 months. At any given time, data collection will take place in two States in each zone (a total of eight States). The survey in each State will take 3-4 months. These aspects have been reported to have been fixed, keeping in view operational, financial and other resource constraints.
- (9) The survey will have three types of questionnaires, namely household, individual and village/ PSU questionnaires.

- (10) In the household questionnaire, information will be collected on age, sex, marital status, relationship to the head of the household, education and employment status and data on water and sanitation facilities, source of lighting, type of cooking fuel, religion, Scheduled Caste/ Scheduled Tribe status of the household head, and ownership of house, land, animals and durable assets such as radio, television and motorcycles. Information will also be collected on household food security, use of private or public health facilities, and access to social entitlements, ration and health insurance cards.
- (11) The individual questionnaire will be employed to collect information on the selected eligible children and adolescents aged 0-19 years, who are usual residents of the sample household. A separate individual questionnaire is developed for children aged 0-4 years, children aged 5-9 years and adolescents aged 10-14 years and 15-19 years.
- (12) There will also be a PSU/ village questionnaire, which will be administered for all 1,885 locations (PSU/ village) to capture the infrastructure related to health and education, and availability of different government schemes and water and sanitation facilities.
- (13) Proposed CNNS will cover nutrition indicators relating to micronutrient intake and goitre, apart from other indicators covered in previous surveys of the MOHFW, such as the NFHS-4 (2014-15), AHS (2012-13), DLHS-4 (2012-13), RSOC (2013)/ CES (2009) and NNMB (2012).
- (14) There is a plan to disseminate *inter alia* key findings/ results at national and State level, apart from unit level data after anonymisation.

4.26 Major issues/ concerns/ suggestions that came up during the discussions in the 81st NSC meeting were as follows:

- (1) The estimates from CNNS may not be comparable with those of other surveys of MOHFW, such as NFHS, due to a variety of reasons.
- (2) Mega-cities, such as Mumbai, Kolkata, Chennai etc., (say cities with 5 million plus population) may be considered as separate strata. In particular, coverage of slum areas may not be limited to Delhi alone and slum areas in other important cities may also be covered.

- (3) Since CNNS will be completed in their respective domains within four months, it will not address the issue of seasonality.
- (4) While reviewing the NFHS-4 by the NSC, it was noted that that the NFHS-4 will be a new benchmark for the future surveys of such nature. Reportedly, the lists of indicators to be estimated in the NFHS-4 and the CNNS have an overlap. But, CNNS seems to have not been formulated to ensure comparability in respect of overlapping indicators available in NFHS-4.
- (5) In order to have estimates on change parameters, it may be desirable to conduct CNNS at least in a sub-sample of the PSUs selected for NFHS-4. It was stated by the representatives of MOHFW (who participated in the meeting) that the list of PSUs of NFHS-4 may not be available, due to confidentiality restrictions.
- (6) The level estimates on a range of parameters proposed to be estimated in CNNS may have low representation/ coverage in the sample, which may pose problems in dissemination.
- (7) The house listing details may be available in the Socio-economic Caste Census records of the M/o Rural Development. Consulting those records may reduce the cost and time to be spent in house listing operations.
- (8) The sample size at PSU level is very low and at SSU level is very high. Hence, there will be very high clustering effect. Moreover, there is a case for enhancing sample size at PSU level, because they are highly heterogeneous. Covering more samples in each SSU, which are relatively homogeneous, will result in wastage of resources and may not contribute to efficiency of estimates.
- (9) CNNS ignores seasonality (both nutrition & morbidity). In view of this, it is not possible to generate level estimates, comparable across States for a very large number of indicators. Consequently, no attempt could be made to generate national level estimates for seasonally effected parameters. In the light of these limitations and also because of difficulties in replicating it in future, CNNS cannot be treated as a baseline.

Recommendations of the NSC

4.27 Based on the material furnished by the MOHFW and the deliberations made in the 81st NSC meeting, the NSC, while agreeing with the issues/ concerns/ suggestions mentioned in the preceding paragraph, concurred with the proposal of MOHFW to conduct CNNS, subject to the following recommendations:

- (1) The instructions contained in the MOSPI Notification dated 5th December 2011 may be complied with.
- (2) The survey methodology may be suitably updated, keeping in view the issues/ concerns/ suggestions mentioned in para-6.
- (3) The MOHFW may examine the NFHS-3 data on sub-round basis in order to identify the nature and timing of strong seasonal effects and use the information to select the appropriate period for survey to be conducted in each State.
- (4) Given the above, MOHFW may examine the feasibility of spreading out State samples evenly across the year as was done in the NFHS-3.
- (5) While disseminating State level estimates, it would be proper to specify the time (period) of the year to which they relate and also to clearly state that they do not hold for the entire year.
- (6) National level estimates may not be arrived at, in respect of seasonally effected indicators. However, in case of non-seasonally sensitive indicators, national level estimates may be attempted.
- (7) If the CNNS can be situated by using the PSU list of NFHS-4 for selection of sample PSUs, the usability of its findings will significantly enhance. Hence, the MOHFW may adopt this approach. Since CNNS and NFHS-4 are both under the MOHFW, there should not be any problems of confidentiality.

4.28 The aforementioned recommendations were forwarded to the MOHFW, *vide* communication no. 17(1)(81)/NSC/2015-16 dated 11th February, 2016.

(Action: MOHFW)

Study on Socio-economic impact of national highways on rural population

4.29 The National Highways Authority of India (NHAI) under the Ministry of Road Transport and Highways submitted, *vide* their letter no. CGM(P&S)/Survey/2016/78074 dated 10-02-2016, a proposal for conducting a study on socio-economic impact of national highways on rural population, for consideration by the NSC. The proposal was considered by the NSC in its 82nd meeting, in accordance with the instructions contained in the 'Guidelines on conducting statistical surveys', notified by the MOSPI *vide* Notification No. 232 dated 5th December 2011 published in the Gazette of India Extraordinary Part-III Section-4. The NHAI representative, who was present in the meeting, stated *inter alia* that they would like to study the impact of NHAI projects on rural population, that the NSC may advise on constituting an Expert Group for

the survey that needs to be conducted for the study and that NHAI will conduct the survey through outsourcing.

4.30 It was noted that rural population derives benefits from a network of roads, which include national highways, State highways, village roads etc. It was also noted that national highways not only link/ provide service to rural population, but they also link/ serve cities, ports, industrial areas etc. This, being the situation, the NSC felt that objectives of the study need to be carefully framed and articulated.

4.31 The NSC felt that the purpose of NHAI could be met possibly in two ways: namely, (1) undertaking an analytical study using secondary data available; and (2) re-surveying a few villages connected with national highways for which data is available from previous surveys.

4.32 The analytical study would be using available data to find out through an econometric modeling exercise, the explanatory capability of the infrastructure provided through national highways on socio-economic situation of rural population. Such exercises undertaken earlier (mostly in other countries) are available in the public domain.

4.33 In the case of the second option, the objective would be to assess the change parameters from a period prior to a NHAI project to the period after completion of the project. For this purpose, the population census data or economic census data or the NSSO data (say, on consumer expenditure of 2004-05 or 2009-10), may be used as a bench mark. A re-survey in a sub-sample of villages (connected with National highways) may be conducted to study the change parameters. Methodology needs to be developed for the re-survey to *inter alia* minimize confounding due to other factors.

Recommendations of the NSC

4.34 The first option does not need the concurrence of the NSC, as no survey would need to be carried out. However, the 'Guidelines on conducting statistical surveys' given in the aforementioned MOSPI Notification would apply in case of the second option.

4.35 In view of the above, the NHAI may first consider both the options and in case they require a survey for the proposed study, they may place a formal proposal before the NSC, indicating the objectives with more clarity.

4.36 The aforementioned views of the NSC were forwarded to the NHAI, *vide* communication no. 17(1)(82)/NSC/2015-16 dated 23rd February, 2016.

(Action: Ministry of Road Transport and Highways)