Note on Sample Design and Estimation Procedure of NSS 79th round

1.0 Introduction

The National Sample Surveys (NSS) are conducted by the Government of India since 1950 to collect data on various socio-economic indicators employing scientific sampling methods. The seventy-ninth round of NSS will commence from July 2022.

NSS 79th round is earmarked for collection of data for compilation of a number of SDG indicators through a 'Comprehensive Annual Modular Survey (CAMS)' along with a survey on Ayurveda, Yoga, Naturopathy, Unani, Siddha, Sowa-Rigpa/Amchi and Homoeopathy (AYUSH).

1.1 Subject Coverage:

1.1.1 **Comprehensive Annual Modular Survey (CAMS):** CAMS is introduced to cater the emerging need for supply of information on high-frequency socio-economic indicators that are not available from any other sources like, administrative data etc. CAMS will collect information required for the purpose of generating some SDG indicators and sub-indicators of Global Indices. This survey will be annual in which some of the modules may be repeated annually and some periodically with more than one year periodicity.

1.1.2 **Survey on AYUSH:** As mentioned earlier, the 79th round NSS will also cover the first ever all-India survey on AYUSH. The survey on AYUSH will be undertaken simultaneously with CAMS.

1.2 Outline of the Survey programme

1.2.1 **Geographical coverage:** The survey will cover the whole of the Indian union except the villages in Andaman and Nicobar Islands which are difficult to access.

1.2.2 **Survey Period:** The survey will commence from July 2022 and it will be of one year duration. CAMS and AYUSH will be carried out simultaneously in same FSU but in different household.

1.2.3 **Sub-rounds:** The survey period of the round will be divided into four sub-rounds of three months duration each as follows:

sub-round 1 :	July - September 2022
sub-round 2 :	October - December 2022
sub-round 3 :	January - March 2023
sub-round 4 :	April - June 2023

In each of these four sub-rounds equal number of sample First Stage Units (FSUs) will be allotted for survey with a view to ensure uniform spread of sample FSUs over the entire survey period. Attempt should also be made to survey each of the FSUs during the sub-round to which

it is allotted. *Because of the arduous field conditions, this restriction need not be strictly enforced in Andaman and Nicobar Islands, Lakshadweep, Leh and Kargil districts of Ladakh and rural areas of Arunachal Pradesh and Nagaland.*

1.2.4 **Schedule of enquiry:** During this round, the following Schedules of enquiry will be canvassed:

Schedule 00CM :	List of Households
Schedule CAMS2022-23 :	Comprehensive Annual Modular Survey
Schedule AYUSH 2022-23 :	AYUSH

1.2.5 **Participation of States**: All the States and Union Territories except Andaman & Nicobar Islands, Daman & Diu and Dadra & Nagar Haveli are participating in this round. Following is the matching pattern of the participating States/UTs in this round:

State/UT	Extent of matching
Nagaland (U)	triple
Manipur, Telangana	double
Maharashtra (U)	one and half
Remaining States/ UTs	equal

1.3 **Sample Design**

1.3.1 **Formation of sub-units (SUs)**:

1.3.1.1 **Rural areas**: A rural village will be notionally divided into a number of sub-units (SU) of more or less equal population during the preparation of frame. Census 2011 population of villages will be projected by applying suitable growth rates and the number of SUs to be formed in a village will be determined apriori.

1.3.1.2 The above procedure of SU formation will be implemented in the villages with population *more than or equal to 1000 as per Census 2011*. In the remaining villages, no SU will be formed.

1.3.1.3 The number of SUs to be formed in the villages (with Census 2011 population 1000 or more) of the frame will be decided before selection of the samples following the criteria given below:

projected population of the village	no. of SUs to be formed
less than 1200	1
1200 to 2399	2
2400 to 3599	3
3600 to 4799	4
4800 to 5999	5
.......and so on	....

1.3.1.4 **Special case**:

For rural areas of (i) Himachal Pradesh, (ii) Sikkim, (iii) Andaman & Nicobar Islands, (iv) Uttarakhand (except four districts Dehradun, Nainital, Hardwar and Udham Singh Nagar), (v) Punch, Rajouri, Udhampur, Reasi, Doda, Kishtwar, Ramban of Jammu and Kashmir (vi) Leh and Kargil districts of Ladakh region and (vii) Idukki district of Kerala, numbers of SUs to be formed in a village will be determined in such a way that each SU contains 600 or less projected population. Further, SUs will not be formed in the villages in the above mentioned districts/States with population less than 500 as per Census 2011. In the remaining villages the number of SUs to be formed for these States/districts will be as follows:

projected population of the village	no. of SUs to be formed
less than 600	1
600 to 1199	2
1200 to 1799	3
1800 to 2399	4
2400 to 2999	5
.......and so on	....

For rural parts of Kerala, similar procedure as mentioned in para 1.3.1.3 above will be adopted with the modification that the SUs will be formed within Panchayat Wards instead of villages.

1.3.1.5 **Urban areas**: SUs will be formed in urban sector also. The procedure will be similar to that adopted in rural areas except that SUs will be formed on the basis of number of households in the UFS frame instead of population, since UFS frame does not have population. Each UFS block with number of households more than or equal to 250 will be divided into a number of SUs. In the remaining UFS blocks, no SU will be formed.

1.3.1.6 The number of SUs to be formed in the UFS blocks of the frame will be decided before selection of the samples following the criteria given below:

number of households of the UFS block	no. of SUs to be formed
less than 250	1
250 to 499	2
500 to 749	3
750 to 999	4
1000 to 1249	5
.......and so on	....

1.3.2 **Outline of sample design**: A stratified multi-stage design will be adopted for the 79th round survey. *The first stage units (FSU) will be villages/UFS blocks/sub-units (SUs) as per the situation.* The ultimate stage units (USU) will be households in both the sectors.

1.3.3 Sampling Frame for First Stage Units (FSUs):

1.3.3.1 There will be no SU formation in uninhabited villages and villages (Panchayat wards for Kerala) with population less than 1000 as per Census 2011 (less than 500 as per Census 2011 for the areas mentioned in para 1.4.1.4.1) and entire village will be considered as one FSU. All such villages (Panchayat wards for Kerala) will be the First Stage Units (FSUs).

1.3.3.2 In the remaining villages, notional sub-units (SUs) following the procedure as described in para 1.4.1.1 will be formed. Such SUs will be considered as First Stage Units (FSUs).

1.3.3.3 For the UFS blocks with less than 250 households, the entire UFS block will be considered as one FSU. In the remaining UFS blocks, the SUs will be considered as First Stage Units (FSUs).

1.3.3.4 List of FSUs as described above will be the sampling frame for respective cases.

1.3.4 Stratification of FSUs:

Rural Sector:

A Special Rural stratum, at all-India level for central sample, will be formed comprising all the uninhabited villages as per census 2011 belonging to all States/UT.

For the remaining villages which are inhabited as per census 2011, districts will be basic geographical unit for stratum formation. Within each district, two Stratum will be formed:

(a)   The villages (i) within a distance of 5 Kms from the district headquarter or (ii) within a distance of 5 Kms from a city/town with more than 5 lakh population, will form a stratum (stratum 1). The information will be obtained from the village directory of census 2011. It will be the stratum 1 for a particular district.

(b)   Rest of the villages will constitute another stratum (stratum 2) of the particular district.

(c)   Special rural stratum has been formed for the State samples also for those State/UTs which have at least 50 uninhabited villages as per census 2011.

Urban Sector:

Two or more strata will be formed in urban areas of each district:

(i)   each million plus city as per census 2011 will constitute separate stratum . Stratum no will be 01, 02, 03....,19
(ii)   rest of the urban areas of the district. Stratum no will be 20.

1.3.5 **Sub-stratification of FSUs**:

1.3.5.1 **Rural sector:** Three groups of villages will be formed within each stratum, except special rural stratum at all-India level as mentioned in para 1.4.4

Group 1: all villages (Panchayat wards for Kerala) with Census 2011 population less than 250

Group 2: all villages (Panchayat wards for Kerala) with Census 2011 population more than or equal to 250 but less than 500

Group 3: remaining villages

The sample size for a rural stratum will be allocated among 3 groups in proportion to population. Let r_1, r_2 and r_3 be the allocations to Group 1, Group 2 and Group 3 respectively. The villages within each group will be first arranged in ascending order of number of population. For all the three groups within each strata, '$r_1/4$'>1, '$r_2/4$'>1 and '$r_3/4$'>1, will imply formation of 2 or more sub-strata in each group. Sub-strata will be demarcated in Group 1, Group 2 and Group 3 respectively in such a way that each sub-stratum will comprise a group of villages (all SUs of a village considered together) of the arranged frame and have more or less equal population.

If number of FSUs in a particular Group is very small, no sub-stratum may be formed in that Group.

1.3.5.2 **Urban sector**: Let 'u' be the sample size allocated for an urban stratum. For all strata, if 'u/4' >1, implying formation of 2 or more sub-strata, all the UFS blocks within the stratum will be first arranged in ascending order of total number of households in the UFS blocks as per urban frame. Then sub-strata will be demarcated in such a way that each sub-stratum will comprise a group of UFS blocks (all SUs of a block considered together) having more or less equal number of households. If number of blocks in a particular stratum is very small, no sub-stratum will be formed in the stratum.

1.3.6 **Total sample size (FSUs)**: **15416** FSUs will be surveyed at all-India level for CAMS and AYUSH survey.

1.3.7 **Allocation of total sample to State/UTs**: As per NITI AYOG list, at present there are 114 aspirational districts in the rural area and 112 in the urban areas. Socio economic upliftment of these districts is of prime interest of the Government. With a view to generate estimates for theses aspirational districts, all aspirational districts and larger districts in rural India will be allocated 20 FSUs with the allocation for other districts will be a minimum of 4 FSUs. In Urban areas, all aspirational districts will be allocated 20 FSUs and districts having million plus towns will have at least 20 FSU allocations. For other districts 4 FSUs will be allocated.

1.3.8 Allocation **to strata**: In rural areas, 20 FSUs will be allocated to the Stratum corresponding to the 'Aspirational Districts (as declared by NITI AYOG)' and large districts and a minimum 4 FSUs will be allocated to the stratum corresponding to other districts in rural areas. In urban areas, 20 FSUs will be allocated to the stratum corresponding to the

'Aspirational Districts' and a minimum 20 FSUs will be allocated to the stratum related to million plus cities. But some of the big million plus cities will be allocated more than 100 FSUs. The stratum related to other urban districts will have a minimum of 4 FSUs allocation. Stratum level allocation will be adjusted to multiples of 4 with a minimum sample size of 4. Within a rural district different group-wise allocation will be proportional to as per census 2011 population. *For special stratum formed at all-India level, 20 FSUs will be allocated.*

1.3.9 **Allocation to sub-strata**:

1.3.9.1 Generally, allocation will be 4 for each sub-stratum in the rural/urban sector. However, allocation will be adjusted in case of constraints of sample size. Thus, allocations may be more than 4 or less than 4 in some cases.

1.3.10 **Selection of FSUs within a stratum/sub-stratum**:

1.3.10.1 From all the sub-strata in both rural and urban sector within each stratum, required number of FSUs will be selected by Simple Random Sampling without Replacement (SRSWOR) scheme.

1.3.11 **Formation of sub-units and listing of households**

1.3.11.1 **Procedure of formation of SUs:** After identification of the boundaries of the village/ UFS block which contains the sample FSU, the village/ UFS block is to be divided into a number of SUs (say, D) as given in the sample list by more or less equalising the present population of the village/UFS block in which the sample FSUs are located. It is to be ensured that SUs formed are clearly identifiable in terms of physical landmarks. For villages/blocks where the number of SUs to be formed is 1 as per the sample list, no SU formation is required.

1.3.11.2 **Listing of households:** All the households of the sample FSU will be listed. Temporarily locked households will also be listed after ascertaining the temporariness of locking of the households through local enquiry.

1.3.12 **Formation of Sub-divisions in the selected SU**: It has been observed in the previous rounds that there happen to be some extreme cases where the population/number of households of the selected SU is very high and listing becomes very difficult. To take care of such extreme situations, such SU may be sub-divided into a number of smaller units (i.e., Sub-divisions) and one of them may be randomly selected. Listing and selection of households may be done in the selected Sub-division unit only. The procedure for formation of Sub-divisions is same as that of formation of SUs within village/blocks. The listing of hamlets will not be required but Sub-divisions will be formed such that each Sub-division has more or less equal population and is a compact area.

The criteria for determining the number of Sub-divisions (D_1) to be formed in the selected rural/urban SUs is as follows:

Approx. population of the SU	no. of Sub-divisions (D_1) to be formed
less than 1500	1
1500 to 2399	2
2400 to 3599	3
3600 to 4799	4
4800 to 5999	5
.......and so on	....

1.3.12.1 **Special case**:

1.3.12.1.1 For rural areas of (i) Himachal Pradesh, (ii) Sikkim, (iii) Andaman & Nicobar Islands, (iv) Uttarakhand (except four districts, i.e., Dehradun, Nainital, Hardwar and Udham Singh Nagar), (v) Punch, Rajouri, Udhampur, Reasi, Doda, Kishtwar, Ramban of Jammu (vi) Leh and Kargil districts of Ladakh region and (vii) Idukki district of Kerala, the criterion for determining the number of sub-divisions (D_1) to be formed in rural SUs is as follows:

Approx. population of the SU	no. of Sub-divisions to be formed
less than 750	1
750 to 1199	2
1200 to 1799	3
1800 to 2399	4
2400 to 2999	5
.......and so on	....

1.3.13 **Formation of second stage strata (SSS) of households and allocation among SSS**:

CAMS: 2 SSS will be formed for CAMS.

- SSS1: households with at least one member (**including deceased former member)** hospitalized (including institutional childbirth) during last 365 days.
- SSS2: remaining households.

AYUSH: 2 SSS will be formed for AYUSH.

- SSS1: Households incurring expenditure for AYUSH treatment/services as in-patient or out-patient for at least one member during last 365 days OR households with at least one member having knowledge about AYUSH systems,

- SSS2: Remaining households.

20 households will be surveyed in each FSU for CAMS while 12 household will be surveyed in each FSU for AYUSH. For CAMS 5 households will be selected from SSS 1 and 15 households will be selected for SSS 2. For AYUSH, 8 households will be selected from SSS 1 and 4 from SSS 2.

survey	SSS	Composition of SSS	Number of households to be surveyed
CAMS	1	households with at least one member (including deceased former member) hospitalized (including institutional childbirth) during last 365 days	5
	2	remaining households	15
AYUSH	1	households incurring expenditure for AYUSH treatment/services as in-patient or out-patient for at least one member during last 365 days OR households with at least one member having knowledge about AYUSH systems	8
	2	remaining households	4

1.3.14 **Selection of households:** The sample households from each SSS for each of the Schedule will be selected by SRSWOR. The two different surveys will be conducted in two different households. If there is any shortage of households then same households will be canvassed for different schedules.

2. Estimation Procedure

2.1 Notations:

s = subscript for s-th stratum

t = subscript for t-th sub-stratum

i = subscript for i-th FSU [SU/ village /panchayat ward/ block]

j = subscript for j-th second stage stratum in an FSU

k = subscript for k-th sample household within an FSU

D_1 = total number of sub-divisions formed in the sample FSU. $D_1=1$, if no Sub-division is formed in the SU)

N = total number of FSUs in any rural/urban sub-stratum

n = number of sample FSUs surveyed including 'uninhabited' and 'zero cases' but excluding casualty for a particular sub-stratum

H = total number of households listed in a second-stage stratum of an FSU

h = number of households surveyed in a second-stage stratum of an FSU

x, y = observed value of characteristics *x*, *y* under estimation

$\hat{X}$, $\hat{Y}$ = estimate of population total X, Y for the characteristics *x*, *y*

Under the above symbols,

y_{stijk} = observed value of the characteristic y for the k-th household of the j-th second stage stratum of the i-th FSU for the t-th sub-stratum of s-th stratum.

However, for ease of understanding, a few symbols have been suppressed in following paragraphs where they are obvious.

2.2 Formulae for Estimation of Aggregates for a stratum × sub-stratum:

422.1 Schedule 00CM (Rural/Urban):

  (i) For estimating the number of households in a stratum × sub-stratum possessing a characteristic:

$$\hat{Y} = \frac{N}{n} \sum_{i=1}^{n} D_1 \times y_i$$

  where y_i is the total number of households possessing the characteristic *y* in i-th FSU respectively.

2.2.2 Schedule CAMS 2022-23 & AYUSH 2022-23:

2.2.2.1 For j-th second-stage stratum of a stratum × sub-stratum:

$$\hat{Y_j} = \frac{N}{n_j} \sum_{i=1}^{n_j} \left[D_1 * \frac{H_{ij}}{h_{ij}} \sum_{k=1}^{h_{ij}} y_{ijk} \right]$$

Where n_j is the number of sample FSUs with non-void j-th second-stage stratum.

2.2.2.2 Aggregate $\hat{Y}$ is obtained combining all the second-stage strata:

$$\hat{Y} = \sum_{j} \hat{Y}_j$$

Note: Values of j for both the Schedule will be 2.

i.e., for Schedule CAMS 2022-23, j = 1, 2.

for Schedule AYUSH 2022-23, j = 1, 2.

2.3 Overall Estimate for Aggregates for a stratum:

Overall estimate for a stratum ($\hat{Y}_s$) will be obtained as

$$\hat{Y}_S = \sum_{t} \hat{Y}_{st}$$

2.4 Overall Estimate of Aggregates at District/State/UT/all-India level:

The overall estimate $\hat{Y}$ at the District/State/ UT/ all-India level is obtained by summing the stratum estimates $\hat{Y}_s$ over all strata belonging to the District/State/ UT/ all-India.

District level estimates can be generated only aspirational districts as per NITI ayog list and million plus cities only for some common socio economic indicator.

2.5 Estimates of Ratios:

Let $\hat{Y}$ and $\hat{X}$ be the overall estimates of the aggregates Y and X for two characteristics *y* and *x* respectively at the District/State/ UT/ all-India level.

Then the combined ratio estimate ($\hat{R}$) of the ratio ($R = \frac{Y}{X}$) will be obtained as

$$\hat{R} = \frac{\hat{Y}}{\hat{X}}.$$

2.6 Estimation of Errors:

2.6.1 Formula for estimated variance (for Rural/Urban):

2.6.1.1 Here FSU is selected by SRSWOR method and USU (households) also selected SRSWOR method. If i^{th} FSU has been selected then h_i unit is selected from this particular FSU x SSS by SRSWOR method.

(a) Formula for aggregate $\hat{Y}$ (for Rural/Urban):

$$\widehat{Y_{ij}} = H_{ij} * \overline{y_{ij}} * D_{1si} \quad \text{and} \quad \overline{y_{ij}} = \left. \sum_1^{h_{ij}} y_{ijk} \middle/ h_{ij} \right.$$

$$Var(\hat{Y}) = \sum_s Var(\hat{Y_s}) = \sum_s \sum_t \sum_j Var(\hat{Y_{stj}})$$

$$\widehat{var}(\widehat{Y_{stj}}) = N_{st}^2 \left(\frac{1}{n_{stj}} - \frac{1}{N_{st}} \right) (1/(n_{stj} - 1)) \sum_1^{n_{stj}} (H_{stij} * D_{1sti} * \overline{y_{stij}} - \frac{1}{n_{stj}} \sum_1^{n_{stj}} H_{stij} * D_{1sti} \overline{y_{stij}})^2$$

$$+ \frac{N_{st}}{n_{stj}} \sum_1^{n_{stj}} H_{stij}^2 * D_{1sti}^2 \left(\frac{1}{h_{stij}} - \frac{1}{H_{stij} * D_{1si}} \right) s_{wij}^2$$

where $s_{wij}^2 = \frac{1}{(h_{stij} - 1)} \sum_{k=1}^{h_{stij}} (y_{stijk} - \overline{y_{stij}})^2$

(b) Formula for ratio $\hat{R}$ (for Rural/Urban):

Note that $X^2 MSE(\widehat{R})$ is unbiasedly estimated by $V(\hat{Y} - R\hat{X})$

$V(\hat{Y} - R\hat{X}) = v(\hat{u})$ where $u_{ijk} = (y_{ijk} - R x_{ijk})$,

$U_i = (Y_i - R X_i)$ and $U = (Y - RX) = 0$ at domain level (State/District).

$\widehat{X^2} \widehat{MSE}(\hat{R}) = \hat{V}(\hat{U})$ at $R = \hat{R}$

$\widehat{Y_{stij}} = \frac{1}{N_{st}} * \sum_k y_{stijk} * n_{stj} * \text{multiplier}$

$\widehat{X_{stij}} = \frac{1}{N_{st}} * \sum_k x_{stijk} * n_{stj} * \text{multiplier}$

$$M\hat{S}E(\hat{R}) = \frac{1}{\hat{X}^2} \sum_s \sum_t M\hat{S}E_{st}(\hat{R})$$

Finally;

$$\widehat{MSE}_{st}(\hat{R}) = \sum_j N_{st}^2 \left(\frac{1}{n_{stj}} - \frac{1}{N_{st}}\right) \frac{1}{(n_{stj}-1)} \sum_1^{n_{stj}} \left(H_{ij} \, D_{1si} \, \overline{u_{ij}} - \frac{1}{n_{stj}} \sum_1^{n_{stj}} H_{ij} \, D_{1si} \, \overline{u_{ij}}\right)^2$$

$$+ \sum_j \frac{N_{st}}{n_{stj}} \sum_1^{n_{stj}} H^2{}_{ij} * D_{1si}{}^2 \left(\frac{1}{h_{ij}} - \frac{1}{H_{ij} * D_{1si}}\right) s_{uij}{}^2$$

Where $s_{uij}{}^2 = \frac{1}{(h_{ij}-1)} \sum_{k=1}^{h_{ij}} (u_{ijk} - \overline{u_{ij}})^2$

$\overline{u_{ij}} = \overline{y_{ij}} - \hat{R} \, \overline{x_{ij}}$

Multiplier formulae are as given in Section 5.

2.6.2 Estimates of Relative Standard Error (RSE):

$$R\hat{S}E(\hat{Y}) = \frac{\sqrt{V\hat{a}r(\hat{Y})}}{\hat{Y}} \times 100$$

$$R\hat{S}E(\hat{R}) = \frac{\sqrt{M\hat{S}E(\hat{R})}}{\hat{R}} \times 100$$

3. Multipliers:

3.1 The formulae for multipliers at stratum/sub-stratum/second-stage stratum level for a Questionnaire type are given below.

schedule	sector	formula for multipliers
00CM	Rural/urban	$\dfrac{N_{st}}{n_{st}}$
CAMS 2022-23& AYUSH 2022-23	Rural/urban	$\dfrac{N_{st}}{n_{stj}} * D1 * \dfrac{H_{stij}}{h_{stij}}$
	j = 1, 2	

Note:

(i) For estimating any characteristic for any domain not specifically considered in sample design, indicator variable may be used.

(ii) Multipliers have to be computed on the basis of information available in the listing Schedule 00CM irrespective of any misclassification observed between the listing Schedule and detailed enquiry Schedule.

4. **Treatment for zero cases, casualty cases etc.**:

4.1 While counting the number of FSUs surveyed (n_{st} or n_{stj}) in a stratum/sub-stratum, all the FSUs with survey codes 1 to 6 in Schedule: 00CM will be considered. In addition, if no household is available in the frame then also that FSU will be treated as surveyed. However, household of a particular Schedule type are available in the frame of the FSU but none of these could be surveyed then that FSU has to be treated as casualty and it will not be treated as surveyed in respect of that Schedule.

4.2 *Casualty cases*: FSUs with survey code 7 as per Schedule: 00CM are treated as casualties. In addition to this, an FSU, although surveyed, may have to be treated as casualty for a particular Schedule type and a particular *second stage stratum* as given in the following para:

4.2.1 FSUs with survey codes 1 or 4 as per Schedule: 00CM having number of households in the frame of j-th second stage stratum greater than 0 (i.e. $H > 0$) but number of households surveyed according to data file as nil ($h = 0$), will be taken as casualties for j-th second stage stratum.

All the FSUs with survey codes 1 to 6 as per questionnaire 0.0 minus the number of casualties as identified above will be taken as the number of surveyed FSUs (n_{stj}) for that (stratum/sub-stratum) ×(second stage stratum).

5. **Treatment in cases of void second-stage strata/sub-strata /strata at FSU or household level**

5.1 A stratum/sub-stratum may be void because of the casualty of all the FSUs belonging to the stratum/sub-stratum.

5.2 When a stratum/sub-stratum is void, the following procedure is recommended:

Case(I): Stratum/Sub-stratum void cases at FSU levels (i.e. all FSUs having survey code 7):

(i)   If a rural/urban sub-stratum is void then it may be merged with the other sub-stratum of the same Group of the stratum. If for a particular group only one sub-stratum is there and only one FSU is allocated and the FSU become casualty then this sub-stratum can be merged with next group sub-stratum with proper size adjustment. Merged(in which void sub-stratum is merging) sub-stratum size may be calculated as :

Merged stratum size + Merging stratum size * (per FSU size of merging sub-stratum/per FSU size of merged sub-stratum).

Here merging sub-stratum means void sub-stratum and merged sub-stratum means in which void sub-stratum is merging. Here per FSU size of a sub-stratum means average number of households per sub-unit in urban area and average population per sub-unit in rural area.

(ii) If a rural/urban stratum (district) is void due to all FSUs being casualty, it may be excluded from the coverage of the survey. The state level estimates will be based on the estimates of districts for which estimates are available and remarks to that effect may be added in appropriate places.

Case (II): Stratum/Sub-stratum void case at second stage stratum level (i.e. all the FSUs were casualties for a particular second stage stratum):

An FSU may be a casualty for a particular *second stage stratum* although survey code is not 7. If all the FSUs of a stratum/sub-stratum become casualties in this manner for a particular *second stage stratum*, the stratum/sub-stratum will become void.

Table 1: Allocation of Sample FSUs in NSS 79th round						
	Central			State		
State	Rural	Urban	Total	Rural	Urban	Total
Jammu & Kashmir	112	132	244	112	132	244
Himachal Pradesh	64	56	120	64	56	120
Punjab	232	160	392	232	160	392
Chandigarh	20	4	24	20	4	24
Uttarakhand	84	84	168	84	84	168
Haryana	164	120	284	164	120	284
Delhi	44	136	180	44	136	180
Rajasthan	508	272	780	508	272	780
Uttar Pradesh	1116	572	1688	1116	572	1688
Bihar	648	380	1028	648	380	1028
Sikkim	80	32	112	80	32	112
Arunachal Pradesh	140	80	220	140	80	220
Nagaland	100	60	160	100	180	280
Manipur	148	144	292	296	288	584
Mizoram	76	104	180	76	104	180
Tripura	144	76	220	144	76	220
Meghalaya	116	52	168	116	52	168
Assam	372	240	612	372	240	612
West Bengal	440	312	752	440	312	752
Jharkhand	416	424	840	416	424	840
Odisha	376	248	624	376	248	624
Chhattisgarh	348	288	636	348	288	636
Madhya Pradesh	616	408	1024	616	408	1024
Gujarat	356	264	620	356	264	620
Daman-Diu & Dadra-Nagar Haveli	24	12	36	24	12	36
Maharashtra	516	608	1124	516	912	1428
Andhra Pradesh	260	168	428	260	168	428
Karnataka	344	284	628	344	284	628
Goa	32	16	48	32	16	48
Lakshadweep	8	8	16	8	8	16
Kerala	184	168	352	184	168	352
Tamil Nadu	416	344	760	416	344	760
Puducherry	16	32	48	16	32	48
A & N Islands	24	20	44	24	20	44
Telangana	240	264	504	480	528	1008
Ladakh	32	8	40	32	8	40
All-India	8816	6580	15396	9204	7412	16616
20 more rural FSUs will be allocated to special rural stratum at all-India level						

Table 2: Distribution of Central Sample in Special Stratum	
State Name	# FSU allotted in Special Stratum
Jammu & Kashmir	1
Himachal Pradesh	1
Uttarakhand	1
Rajasthan	1
Uttar Pradesh	2
Bihar	1
Meghalaya	1
Assam	1
West Bengal	1
Jharkhand	2
Odisha	1
Madhya Pradesh	1
Maharashtra	1
Karnataka	1
Tamil Nadu	1
Telangana	3
Total	20

Table 3: Distribution of State Sample in Special Stratum		
State	# Uninhabited villages in special stratum as per census 2011	# FSU allotted in Special Stratum
Jammu & Kashmir	213	4
Himachal Pradesh	2808	4
Punjab	412	4
Uttarakhand	1047	4
Haryana	199	4
Rajasthan	1408	4
Uttar Pradesh	8960	4
Bihar	5801	4
Arunachal Pradesh	331	4
Manipur	67	4
Mizoram	126	4
Meghalaya	380	4
Assam	1024	4
West Bengal	2740	4
Jharkhand	2902	4
Odisha	3636	4
Chhattisgarh	559	4
Madhya Pradesh	2969	4
Gujarat	382	4
Maharashtra	2706	4

Table 3: Distribution of State Sample in Special Stratum		
State	# Uninhabited villages in special stratum as per census 2011	# FSU allotted in Special Stratum
Andhra Pradesh	913	4
Karnataka	1943	4
Tamil Nadu	930	4
Telangana	600	4
Total	43056	96
All-India	43254	