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Report of Expert Committee on Review of the Existing Methodology of Integrated Sample Survey (ISS)

Animal Husbandry Statistics (AHS) Division,
Department of Animal Husbandry & Dairying (DAHD).
Ministry of Fisheries, Animal Husbandry & Dairying,
Government of India

Krishi Bhavan, New Delhi

Dated the 19th February, 2026

Dr. G C Manna, Professor at IHD and former Director General, CSO & NSSO, the Chairman of the Expert committee on Review of the existing Methodology of Integrated Sample Survey (ISS) handing over the Report of the Expert Committee to Shri Naresh Pal Gangwar, Secretary, DAHD in the presence of Shri Jagat Hazarika, Advisor (Stats), DAHD & Shri Baidhar Swain, AD, AHS Division.

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Preface

Livestock forms the backbone of rural India, providing nutrient-rich foods to address deficiencies of protein and malnutrition in the population. The livestock sub-sector alone contributes more than 25% of the total value of output of the Agriculture sector. This sector also plays a significant role in supplementing household incomes. Since 1985-86, the Integrated Sample Survey (ISS) has been the main source of crucial data on milk, eggs, meat and wool production, supporting policy and investment decisions.

India's socio-economic landscape has witnessed profound changes in recent decades. The distribution of livestock in rural and urban areas, patterns of urbanization, and the very structure of animal husbandry enterprises have undergone significant changes. Recognizing that the ISS framework, last reviewed in 2009, required a thorough re-examination to remain fit for purpose, the Department of Animal Husbandry and Dairying (DAHD) constituted this Expert Committee.

The mandate of the Committee was to review the existing ISS methodology to enhance its scientific rigor and operational efficiency. Throughout a series of in-depth discussions and consultations with stakeholders, the Committee carefully scrutinised the current sampling framework, design strategies, estimation techniques, and schedules for data collection.

The Committee identified key issues with the sampling framework, including the need to expand coverage, and increase sample size to ensure reliable State-level estimates. Emphasis was placed on accurately representing rare and high-yield breeds through deeper stratification of villages and urban wards as per the sampling frame, and further refining sampling procedures for better accuracy and representation.

In response, this report puts forward a set of targeted and actionable recommendations. The core of the proposed reform is a move towards a deeply stratified sampling design. This new approach strategically ensures due representation of villages and wards with butcher shops and varying livestock densities. We also recommend a dynamic allocation of samples between rural and urban areas based on actual livestock population, moving away from a rigid administrative formula.

While the Committee advocates for the retention of the existing concept of 'Hamlet Group' i.e. segment formation in the large sample villages and urban wards, its success hinges on significantly improved training and supervision of field staff.

Furthermore, the Committee emphasizes the need to develop robust estimation methodologies for valuable ancillary data already being collected, such as fodder area and disease outbreaks, to unlock their full potential for policy planning.

The Committee is acutely aware that these proposed changes are substantial. Still, we suggest to conduct a comprehensive Pilot Study in select States to test the refined methodology, assess improvements in precision, and refine implementation protocols before nationwide rollout.

I extend my sincere gratitude to all Committee members, DAHD Officials specially Shri Jagat Hazarika, Advisor (Statistics), representatives from ICAR-IASRI, and State directors for their invaluable insights and dedicated contributions throughout this consultative process. Our collective endeavor has been guided by a shared objective to fortify the statistical foundation of India's livestock sector. It is my earnest hope that the implementation of these recommendations will empower the ISS to generate more accurate, reliable, and timely data, thereby enabling evidence-based decisions that propel the sector to new heights of productivity and sustainability.

G. C. Manna

(Dr. G. C. Manna)
Chairman of the Expert Committee

February, 2026
New Delhi

List of Appendices

CHAPTER-I

Background

1.1 INTRODUCTION

Livestock rearing is an age-old livelihood practice. It is an important economic contributor to the rural households of India. Animal husbandry is still relevant today as a large section of society is actively engaged and dependent on it. India is rich in livestock biodiversity and has developed many specific breeds adapted to various climatic conditions. From 2014-15 to 2022-23, the livestock sector demonstrated strong performance, growing at a Compound Annual Growth Rate (CAGR) of 7.38 per cent at constant prices. Its contribution to the Gross Value Added (GVA) of agriculture and allied sectors increased notably—from 24.32 per cent to 30.38 per cent over the same period. In 2022-23 alone, livestock accounted for 4.66 per cent of India's total GVA, helping to boost the per capita supply of milk, eggs, and meat – the rich nutrition supplement for human food. Often described as a "sunrise sector," it supports around 30 million individuals, many of whom belong to vulnerable and marginalized groups (Ministry of Finance, 2024).

The Department of Animal Husbandry and Dairying (DAHD), under the Ministry of Fisheries, Animal Husbandry & Dairying is responsible for monitoring livestock production, preservation, disease protection, stock improvement, and dairy development, along with matters related to the Delhi Milk Scheme (DMS) and the National Dairy Development Board (NDDB). In addition, it also advises State Governments and Union Territories in formulating policies and programs for Animal Husbandry and Dairy Development. The key thrust areas include developing necessary infrastructure in States and UTs to enhance productivity, enabling proper healthcare provisions, and strengthening central livestock farms (Cattle, Sheep, and Poultry) to develop superior germplasm for distribution to states. Undoubtedly, robust statistics is the key for informed decision in all these policy matters.

1.2 Integrated Sample Survey (ISS)

The ISS scheme is implemented by the Department of Animal Husbandry & Dairying, Ministry of Fisheries, Animal Husbandry & Dairying, Government of India through State/UT Animal Husbandry Departments. Director, Deptt. of Animal Husbandry of every state acts as nodal officer for implementing the scheme. The States/UTs carry out the survey as per the existing methodology and instruction led by the department. Through ISS, estimates of 4 major livestock products namely milk, egg, meat and wool are produced at PAN-India level in the form of an annual document, known as ***'Basic Animal Husbandry Statistics'*** which ensures timely availability of reliable time series data and trends. The disseminated statistics enables formulation, monitoring and evaluation of various developmental schemes in this sector. The data on ISS has been collected since 1985-86. The schedule of enquiry and methodology of data collection for Integrated Sample Survey were initially developed by ICAR-IASRI in 1985-86**.**

1.3 Coverage of the Study

The Survey is conducted in the entire rural and urban areas of States/UTs. It is conducted in the selected sample villages/urban wards enlisting all household enterprises, non- household enterprises, institutions like all farm houses, slaughter houses, butcher shops pursuing animal husbandry and related activities.

1.4 Period of Survey

The entire period of one year is divided into three Seasons of 4 months each (see Tables 1 & 2 for details including the Schedules canvassed in the ISS).

Table 1. Period of Survey of ISS

Name of the Season	Period of collection of data
Summer Season	1st March to 30th June (122 days)
Rainy Season	1st July to 31st October (123 days)
Winter Season	1st November to 28th / 29th February (120 /121 days - depending upon leap year)

Table 2. Schedules for Data Collection from the Field

Schedule-I **General Information of villages/Urban Ward** Filled by Enumerator for Village/Urban Ward selected for Complete Enumeration.	**Schedule-II** **Complete Enumeration of villages/Urban Ward** Filled by Enumerator for Village/Urban Ward selected for Complete Enumeration.
Schedule-III **Details of Milk yield in selected households/enterprise** Filled by Enumerator for selected Households/Enterprises for Village/ Urban Ward selected for Detailed Survey Schedule-III to be repeated in every round of the season. (One Month is One Round)	**Schedule-IV** **Details of Egg production in selected Households/Enterprise** Filled by Enumerator for selected Households/Enterprises for Village/ Urban Ward selected for Detailed Survey Schedule-IV to be repeated in every round of the season. (One Month is One Round)
Schedule-V **Details of Egg production in Commercial Poultry Farms at District level** Filled by District Officials for all operational commercial poultry farms in the district.	**Schedule-VI** **Details of Wool production in selected households/enterprise** Filled by Enumerator for selected Households/Enterprises for Village/ Urban Ward selected for Detailed Survey Schedule-VI to be repeated in every round of the season. (One Month is One Round)
Schedule-VII **Details of Meat production in Slaughter Houses at District level** Filled by District Officials for all operational Slaughter Houses in the district.	**Schedule-VII** **Details of Meat production in Commercial Poultry Farms at District level** Filled by District Officials for all operational commercial poultry farms in the district.

CHAPTER-II

Constitution of Expert Committee

2.1 Introduction

The Integrated Sample Survey (ISS) scheme was initially launched in 1985-86 and has since been implemented by various States and UTs under the overall supervision of the Department of Animal Husbandry and Dairying (DAHD). The schedule and methodology for the ISS were originally developed by ICAR-IASRI. To generate reliable estimates of major livestock products, ICAR-IASRI conducted a series of methodological studies for estimating these products individually, as well as pilot surveys using an integrated approach for simultaneous estimation. This led to the development of the methodology for the Integrated Sample Survey.

Since 1985-86, India has undergone significant socio-economic transitions over the decades, including changes in the distribution of livestock between rural and urban areas, the social structure of farmers, and patterns of urbanization. The ISS methodology was last reviewed in 2009 by a committee chaired by the Animal Husbandry Commissioner (DAHD). The key recommendations from that review included expanding coverage by incorporating the unregistered sector - such as butcher shops and households — in meat production estimates, revising survey schedules by separating non-descript cattle from indigenous breeds, and incorporating breed-wise data.

The need to revise the entire ISS process, from the sampling frame to the estimation procedures, was discussed at the Annual Meeting of the Technical Committee of Direction (TCD) for Improvement of Livestock Statistics, held in Bangalore on 29th-30th September 2022. The committee acknowledged the necessity of updating the methodology to improve the accuracy and relevance of estimates.

Accordingly, the Technical Committee recommended the formation of an Expert Committee to examine, review, and recommend improvements in the existing Integrated Sample Survey framework. This includes an assessment of the current sample size and sampling frame of the

ISS, the sampling method and selection procedure followed under the survey and the methodology used for estimation of major livestock products. The committee was also mandated to review the existed schedules for data collection on the production of milk, egg, meat and wool along their coverage. In addition, the committee was mandated to examine and provide recommendations on any other issues related to the ISS.

In accordance with the above decision, DAHD constituted an Expert Committee under the chairmanship of Dr. G. C. Manna (Ex-Director General, CSO, Ministry of Statistics & Programme Implementation, Government of India) to review and refine the ISS methodology. The primary task of the Expert Committee was to examine the current framework and procedures of the ISS and recommend improvements to strengthen the scientific rigor, accuracy, and operational efficiency of data collection and estimation methodologies under the scheme.

2.2 Composition of the Expert Committee

Sl.No.	Name of the Member	Designation
1.	Dr. G.C. Manna. Ex. DG, MoSPI	Chairman
2.	Shri Hiranya Borah, Ex. DDG, D/o of Drinking Water & Sanitation	Member
3.	Senior Advisor, NITI Aayog (Agriculture & Allied sector)	Member
4.	Adviser (Statistics), DAHD, New Delhi	Member
5.	Advisor (Agriculture Census), D/o Agri. & Farmers welfare	Member
6.	DDG, NAD, MoSPI, Delhi	Member
7.	DDG, SDRD, MoSPI, Kolkata	Member
8.	Director, ICAR-IASRI, New Delhi	Member
9.	Director, ISI, Kolkata	Member
10.	Chairman, NDDB, Gujarat	Member
11.	Head of Sample Survey, ICAR-IASRI, New Delhi	Member
12.	Director, AHD, Arunachal Pradesh, Andhra Pradesh, West Bengal, Maharashtra, Uttar Pradesh	Member
13.	Joint Commissioner, Dairy Division, DAHD, New Delhi	Member
14.	Director, AHS, DAHD, New Delhi	Member Secretary

2.3 Terms of Reference (TOR) for the Expert Committee

Terms of Reference (TOR) of the committee were to *examine, review and recommend the following:*

I. The existing Sample Size and frame of the ISS.

II. The existing Sampling Method & Selection Procedure in ISS.

III. The existing Methodology for Estimation of Major Livestock Products.

IV. The existing Schedules for data collection on production of Milk, Egg, Meat and Wool and its coverage.

V. Any other issue related to ISS

CHAPTER-III

Discussion in Expert Committee Meetings

Initial discussion in the Expert Committee (EC) included the introduction of existing methodology of ISS in detail, right from the objectives, sampling frame and design covering the first, second and third stage sampling units (**Figures 1-3**). It was informed that the sampling design is a stratified three stage design with district as stratum. The first stage units are villages/ urban wards, second stage units are households and third stage units are animals.

Figure 1: Overall Sampling Frame of ISS

Figure 2: First-stage Sampling in ISS

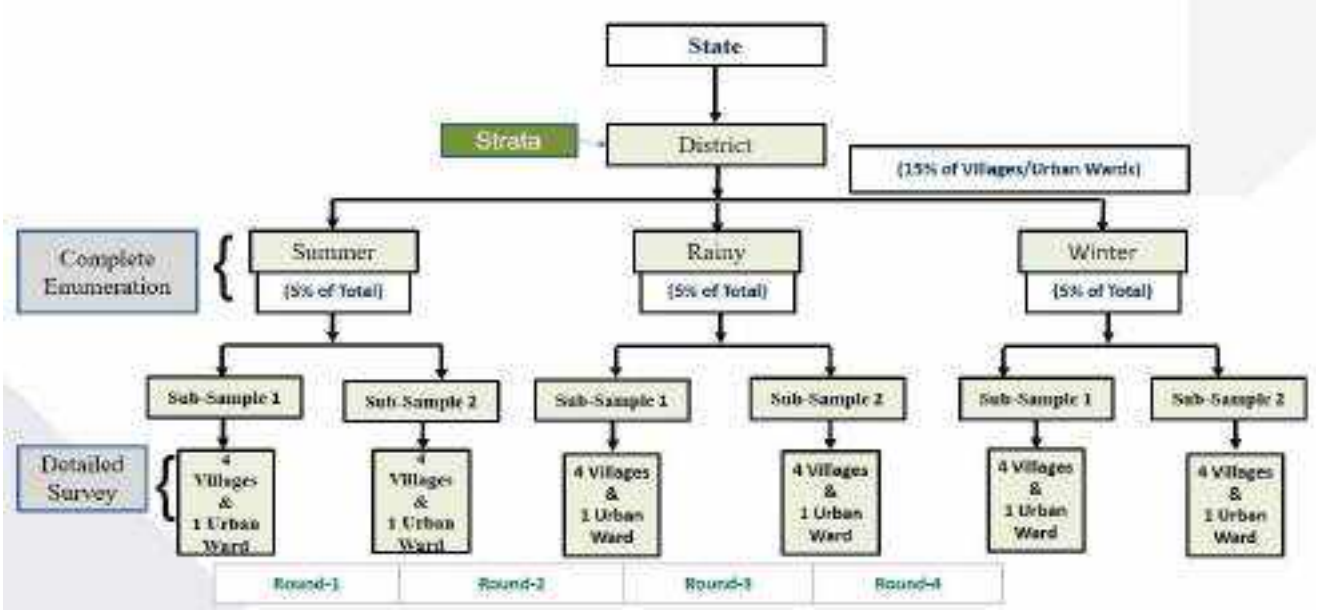
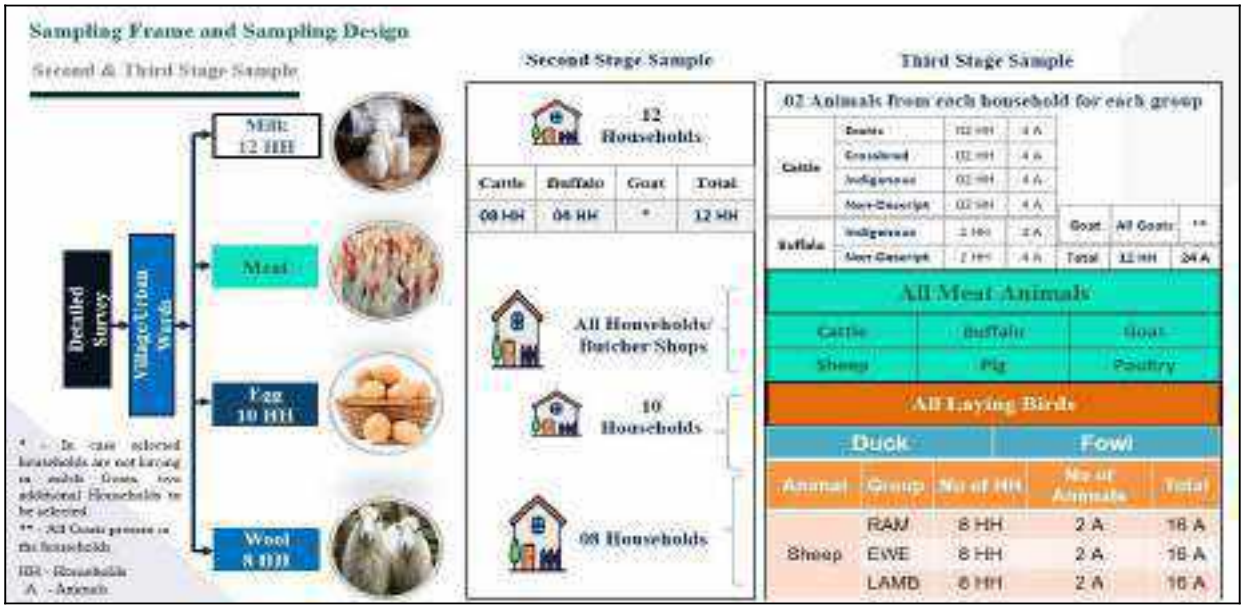


Figure 3: Second and Third Stage Sampling under ISS



Based on the initial discussion, several major issues in the existing methodology were highlighted before the committee. These include the selection of hamlet groups, the formulation of an appropriate sampling frame, and the procedures adopted for selecting the sample. Additionally, concerns were raised regarding the estimation procedures currently in use, as well as certain categories of information that, although collected during the process, have not been published or made available for analysis.

Further, several specific issues related to the sampling frameworks were highlighted. These include the need for sampling frame expansion to ensure broader and more representative coverage, as well as the inclusion of slaughterhouses within the sampling design. Concerns were also raised about the adequacy of the current sample size, particularly regarding its capacity to produce reliable estimates at the State level. In this context, the committee emphasized the importance of adequately capturing rare and high-yield breeds within the sample to have a comprehensive picture of livestock diversity. Issues pertaining to the existing sampling procedures were noted, with suggestions for refinement to improve accuracy and representation.

On the basis of above observations and discussion during the initial meeting, four key recommendations were made in the initial meeting of the committee for further action: *(i) Examining the existing method as well as the frequency/extent of Hamlet Group formation for detailed survey, (ii) Assessing State wise key estimates and their Relative Standard Error (RSE), (iii) Preparing a comparative statement of no. of animals in*

production as per latest survey and as per 20th Livestock Census and (iv) Studying the adequacy of State-wise sample size at various stages of sampling.

In its second meeting, the Expert Committee (EC) discussed the action taken report as per its recommendations in the first meeting. The information on State-wise number of villages/urban wards with hamlet-group formation was presented to the committee along with state-wise sample size of units at various stages of sampling. Details of hamlet-group formation and state-wise sample size of various stages of units are mentioned at **Appendix-I**. It was observed that the frequency/extent of hamlet-group (rural) and sub-group (urban) formation was not uniform across the States. Further, it was informed to the committee that every State decides independently the criteria to form these groups which affects the estimates.

In order to improve the related estimates, the EC strongly felt the need to explore the possibility of stratifying villages/wards based on the presence of **butcher shops** as well as **rare/exotic cattle breeds** so that in the sample there is adequate representation of villages/wards having the presence of rare animals and also of butcher shops if so warranted.

For district-wise analysis on the number of sample villages/wards having the presence of some rare animals and butcher shops, the State of U.P. was taken as an example and the findings presented before the EC members. Details are mentioned at **Appendix-II.** Further, for the corresponding State/District-wise analysis, the tabulation was done for four sub-categories which are, a**)** No of villages/Urban wards having Rarer animal/Exotic Cattle; b) No of Villages/ Urban Wards having Sheep; c) % of Villages having Butcher Shops, and d) State/UT wise number of villages/wards having a particular animal as per survey in 2023-24 **(Appendix-II).**

There was a lack of clarity among the members in the 3rd meeting of the EC as to whether the information on 'slaughter house' is being collected in the Livestock Census or not. The same was clarified by the division in the present meeting. It was reported that the requisite information is part of the data collection of Livestock Census and the information, if required, will be available for further stratification in the context of estimation of meat production.

To take a call regarding the adequacy of sample size, the EC decided that the estimates of relative standard error (RSE) for number of in-milk animals and milk production (for all animals, cattle, and buffalo) were to be generated at both State and District levels, along with RSEs for estimated numbers and production of egg, meat, and wool. In accordance with this decision, subsequently, RSE was calculated for milk production, with respect to 3 states namely Uttar Pradesh, Rajasthan, Karnataka where minimum and maximum RSE for the number of animals as well as production level were calculated**.** The result indicated a huge variation in the RSE over the districts with RSEs derived based on the sub-sample wise estimates (**Appendix-III**). Hence, it was suggested to calculate the Relative Standard Error (RSE) for the number of animals and production using the sampling variance formula for comparison. **(**see **Appendix-IV).**

As indicated in the comparative analysis, the Relative Standard Error (RSE) for the number of animals was evaluated for larger states such as Uttar Pradesh, Rajasthan, and Karnataka, based on estimates from Sub-sample 1 and Sub-sample 2, as well as using the sampling variance formula. A major conclusion that can be made from the analysis presented in Appendix-IV is that district-wise estimates of number of animals based on the ISS appear to be not robust.

It was also observed that sometimes the estimated values were very low, while the variance was notably high. In light of these findings, the Committee recommended that a similar analytical exercise may also be carried out and findings made available in respect of some smaller States and Union Territories such as Goa, Chandigarh, and Puducherry, for both the number of animals as well as for production. The objective is to assess whether similar issues of low estimated values and high variance are also present in these regions. This analysis will help in assessing whether the current methodology including the method of stratification and the sample size are adequate or if adjustments are needed to enhance the precision of the estimates.

As per the recommendation of Expert Committee in its 2nd meeting, one or two states were suggested to verify the animal counts in villages where the 2023–24 Complete Enumeration Survey data shows significant variation compared to the 20th Livestock Census. Observations were received from the two states namely - Uttar Pradesh and Karnataka. For the state of Karnataka, it was found that in rural areas, factors like animal births, deaths, or the selling of animals can lead to fluctuations in the overall population. For instance, changes in farming practices, such as mechanization, may reduce the need for livestock in some cases, leading to a

decrease in animal numbers. In addition, urbanization and shrinking pasture lands, along with agricultural mechanization, have led to a reduced number of animals. Further, some urban dwellers may not keep so many livestock due to the limited space and other factors like cost and regulations. Also, diseases or climate-related impacts, such as drought or floods, also affect animal populations, further contributing to variations. Likewise, in Uttar Pradesh as well, a significant decrease in the number of animals in the 20th Livestock Census was noticed as compared to the 19th Livestock Census which emphasized on the gap between the census and survey period leading to such variations.

Also, state-wise data on villages with or without sheep, in-milk cattle, and similar classifications for other animals was requested for compilation which was shown to the committee in the 3rd meeting (**Appendix-V).** In regard to the selection of data collected but not used in reporting/estimation, the Committee, in its 2nd EC meeting, advised to conduct stakeholder consultations and present the outcomes for review. This meeting was later held on 21-01-2025 at Chanderlok Building, New Delhi under the Chairmanship of Sh. Jagat Hazarika, Advisor, Statistics, AHS Division where the usability of the collected data under the Integrated Sample Survey under non- mandatory option was discussed such as total cultivated area, area under fodder crops, location and distance to the nearest veterinary services facilities, any outbreak of diseases of livestock/poultry during the last season, use of milk produced (for self-consumption, sale as liquid milk, for selling milk products), details of average daily feed consumption during last 30 days, details of utilization of cow, buffalo, goat milk produced, utilization of dung of cow, buffalo, goat and sheep, production purchase and disposal of egg in the ISS data collection schedule in earlier survey and made compulsory now onwards was also brought to the discussion of the committee.

In order to derive reliable and robust estimates for those items where data is currently being collected and for which estimations have not yet been generated, it was found essential to design a well-structured and scientifically sound estimation procedure. Accordingly, ICAR- IASRI was assigned to develop an appropriate methodology for these optional items. ICAR- IASRI apprised the Committee that the methodological development could be commenced, once the data for these items are available. So, it was found to be appropriate that the estimates may be developed after the data of these items for the year 2025-26 is available.

In order to identify trends in livestock data, such as milk, egg, and wool production, Committee in its 3rd meeting suggested to calculate a comparative analysis for the past three years which has been discussed ahead under 4th EC meeting details. Thereafter, based on recommendations of the 3rd EC meeting**,** a comparative study on the production of milk, eggs, and wool was undertaken by analysing the Major Livestock Products (MLP) data from the last three years. This data was systematically compared with figures from the 2019 Livestock Census to assess trends and changes over time. The 2019 Livestock Census was considered as the base year for this analysis, and the percentage change in production was calculated for the years 2021, 2022, and 2023. The objective of this comparative exercise was to **identify growth patterns, regional variations, and emerging trends in livestock product outputs across the country**. The findings of the study revealed that most of the states experienced significant growth in the production of these commodities over the past three years as mentioned at **Appendix-VI.**

The 5th EC meeting served as the final milestone of the review process in which the detailed discussion on the ATR of the previous meetings were discussed to identify the gaps, if any.

In addition, major relevant discussions of all the previous meetings were also presented before the Committee. However, Relative Standard Error (RSE) and the variance of the estimates of production and number of animals in small states could not be estimated and shown to the Committee due to malfunctioning of server at IASRI-ICAR. It was assured to the Committee that once the server become functional those will be shared with the Committee. The Committee desired that the same could be supplied to the Committee as soon as possible so that the report of the Committee can be finalized at the earliest.

Additionally, the detailed discussion on the draft report on the **'Review of the existing methodology of Integrated Sample Survey (ISS) Scheme**' was done to finalise the recommendations.

CHAPTER-IV

Key Challenges

In the existing methodology of ISS, there have been some gaps which are described below:

I - Challenges with Existing Sample Size and frame of the ISS

- Over the course of five years, villages or urban wards may undergo changes such as division, merging, or demographic shifts (change in boundaries). Such changes are not considered which results in inaccurate estimation of number of animals as the number of animals is estimated by ratio estimator. Change in demographic shifts/merging/division of villages/urban wards results in huge difference in number of animals as per census and as per annual survey.

- In this integrated methodology, sampling frame of villages/urban wards having at least one livestock animal as per the previous Livestock Census raises a concern about the completeness of the coverage of the entire livestock population.

- The villages/wards that did not report any animals in the previous census are being excluded from the sampling frame. Since there can be addition of animals in such villages/wards in the years after Livestock census, it was suggested that a thin sample of such villages/wards may be added to the residual sample drawn from the villages/wards having at least one animal.

- It has been observed that in many districts the selected villages/urban wards for complete enumeration **do not contain a particular animal like sheep or a particular group of an animal like exotic cattle**. In such cases the estimate for number of animals becomes zero although the previous year's estimates were **non-zero in those districts.**

II - Challenges with Sampling Method and Selection Procedure in the ISS.

Since samples are getting selected by SRSWOR, there will be chance to select a village/ward even with a single livestock/poultry. Therefore, samples are selected in such a way that animals of particular category /

categories may not be available in any of the sample drawn for that district though production was there as per the past record.

Selection of Hamlet Group: For reducing the listing work in Complete Enumeration, hamlet groups (hg) / sub-groups are formed in selected sample villages/urban wards having more than 1200 population. After identification of the boundaries of the sample village/ward, it is divided into a suitable number (say, HG) of hamlet groups (hgs).

Hamlet Group Formula for estimating total number of animals at village/urban ward level:

$$N_V = N_{SH0} + (HG-1) \times N_{SH1}$$

N_V	Number of animals for a village/urban ward for a group of Animal (Exotic/Crossbred/Desi Fowl)
HG	Number of hamlet groups formed in a village/urban ward for a group of Animal (Exotic/Crossbred/Desi Fowl)
N_{SH0}	Number of animals as per survey in first hamlet group '0' in a village/urban ward for a group of Animal (Exotic/Crossbred/Desi Fowl) with hg '0' being the one having maximum share in the livestock population of the entire village/ward
N_{SH1}	Number of animals as per survey in second hamlet group '1' in a village/urban ward (randomly selected from among the remaining hg's) for a group of Animal (Exotic/Crossbred/Desi Fowl)

Approximate present population in the sample village/urban ward	**Number of hamlet groups to be formed**
Less than 1200	0
1201 to 1800	3
1801 to 2400	4
2401 to 3000	5
..... and so on	

Observation on Hamlet Group:

1.	The 0^{th} hamlet group should not generally have lesser number of animals considering all types of animals taken together.
2.	The formula gives a lot of weight to the livestock count of randomly selected hamlet group. If this group has an unusually high or low number of animals then it may result in over or under estimation.
3.	The formula doesn't consider factors that livestock distribution over the villages/urban wards are not even. Especially, in cases of urban wards where the livestock distribution is condensed to very specific areas.
4.	It was observed that the hamlet group concept seems to be very complex and therefore could not be implemented in the field properly. As mentioned in the ISS Instruction Manual, the 0^{th} (first) hamlet group may be selected with maximum percentage share of livestock population but many such cases were found where the number of animals in 0^{th} hamlet group are less than the number of animals present in 2nd hamlet group. The same observation is made in many districts of various states.
5.	It was also observed that after applying the hamlet group formula, the estimate of number of animals for few groups comes closer to the census figures whereas for most of the groups the estimate is either very high or low, indicating the fact that the selection of sample HGs is not being properly done.

III - Challenges in Generating Estimates of Major Livestock Products:

Unlike NSS, LC data is used as auxiliary information to obtain the ratio estimator for number of in-milk/layers. Due to this reason, it may happen that data may not be available in LC though animal present as per survey which further brings difficulties at the time of estimation.

Non availability of yield rate: There are some cases where at the time of detailed survey no animal has been found in the selected village for a particular animal/category to record the yield rate which leads to zero production although there are animals listed during complete enumeration.

Milk Commodity: It has been observed that many villages/urban wards do not contain 24 households having 02 households/enterprises for each group of animal i.e. exotic, crossbred.

I. It has been observed that it is difficult to ensure that the same animal yield is captured in all four rounds in four months.

II. In some cases due to sample selection through Simple Random Sampling Without Replacement (SRSWOR), some of the animals' representation becomes zero. As a result, though the animal is available in that district, the estimate of milk for such category becomes nil. Accordingly, the Committee took the view that a deep stratification (at village/animal/group/species level) is to be introduced before the selection of villages/wards to resolve such issues arising in estimation of milk from different groups of animals, like exotic, indigenous, crossbreed etc.. For example, in some big states, there are several villages having exotic cows but due to exclusion of some such villages in the sample drawn by SRSWOR, the estimate for this category of cow could not be made.

Issues involved in meat estimation: The current practice during detailed surveys is to list the animals available for slaughter and obtain the meat production per animal from registered slaughterhouses. However, if no registered slaughterhouse is present in a district, then information is to be taken from at least two butcher shops from that district covering all the animals (Cattle, Buffalo, Goat, Sheep, and Pig) slaughtered in the district

IV - Challenges with Slaughter house

- In the case of poultry meat production at the household or backyard level, there is no standard formula for generating estimates in the instruction manual. It has been observed that in several districts, the reported number of animals slaughtered exceeds the estimated figures in comparison to the previous season estimates. These instances are especially common during festive periods. An example of Kerala was given where during the time of festival of Eid, animals from across the border are brought in to be slaughtered.
- It was contemplated whether this issue needs to be tackled or not, since this practice makes the consumption numbers greater than production numbers.

- Due to this practice, the Gross Value Added (GVA) of the particular state gets affected because the output is high and accounted for while the corresponding input is not accounted for.

- It was observed that there is sudden increase in meat production between seasons and this may be the one of the reasons for such cases. Also, it was observed that there is sudden decrease in poultry meat production between the seasons due to massive disease spread. For example, Kerala reported that due to Avian Flu impact the poultry meat is impacted.

V - The existing Schedules for data collection on production of MLP.

There are certain information currently being collected through the existing schedules of the Integrated Sample Survey (ISS) for which estimates are not being generated. These include information such as the total cultivated area, area under fodder crops, location and distance to the nearest veterinary service facilities, and any outbreaks of livestock or poultry diseases during the last season. Additionally, data on the utilization of milk produced (for self- consumption, sale as liquid milk, or for preparing milk products), average daily feed consumption over the past 30 days, utilization of cow, buffalo, and goat milk, utilization of dung from cow, buffalo, goat, and sheep, and the production, purchase, and disposal of eggs are also being collected but not currently estimated.

The EC found these information to be highly valuable for evidence-based policy planning, decision-making, and development of the livestock sector. Therefore, it is essential to ensure that such crucial data is properly estimated and utilized to formulate effective and targeted livestock policies.

CHAPTER-V

Key Recommendations

I. Sample Size of First Stage Units (FSUs)

A. Rural-Urban Distribution of Samples: As the majority of livestock and its related activities are concentrated in rural areas, a revision in the distribution of the samples between rural and urban areas is necessary to reflect ground realities. The present methodology often resulted in suboptimal representation by allocating samples based on administrative units rather than livestock density. To enhance the accuracy of estimates, the committee recommended that the sample distribution should be dynamic, giving greater statistical weightage to the rural or urban that holds the larger share of the livestock population.

By optimizing the sample distribution in this manner, the revised methodology would better reflect the actual ground realities and improve the efficiency and reliability of the Integrated Sample Survey (ISS) estimates without increasing the overall resource requirements or workload for data collection.

In view of the above, the committee recommended the following distribution framework:

a) ***Total Sample Size:*** The district-wise total sample size shall remain at a maximum of 160 First Stage Units (FSUs).

b) ***Population-Based Proportional Allocation:*** Instead of a fixed or equal distribution, the total sample size (160 FSUs) shall be distributed between rural and urban sectors in direct proportion to the Total Livestock Population (irrespective of commodity/animal/groups) recorded in the respective rural and urban areas of the district as per the latest Livestock Census.

For example: if a sector (e.g., Rural) holds 80% of the district's livestock population, it will be assigned 80% of the total sampling units (approx. 128 villages), while the remaining 20% will be allocated to the Urban sector (approx. 32 wards). This ensures that the statistical weight of the sample matches the actual density of the livestock population (see also the subsequent recommendation under B (b) in this context).

B. Handling Administrative Variations (Edge Cases): To ensure that the methodology remains robust across diverse administrative structures, the following strategy needs to be applied:

a) **Single-Sector Districts:** In districts where the sampling frame is comprised entirely of one rural or urban (e.g., metropolitan districts consisting solely of Urban Wards or rural districts with negligible urban presence), the maximum of 80 rural or 80 urban wards may be selected accordingly.

b) **Minimum Representation:** In districts where both rural and urban wards exist but one possesses a negligible livestock population, a minimum number of sampling units should still be allocated to the smaller sector to ensure comprehensive coverage, provided that analysable units exist within that frame.

II. Sampling Design

To address issues related to the missing/under-representation of rare animals such as Exotic Cattles, Sheep animal for wool commodity and Pig etc. and the exclusion of villages/urban wards that reported no animals in the latest livestock census, the committee recommended a refined stratification approach which utilizes specific strata and sub-strata based on availability of animal and density to ensure a more representative sample.

A. Refined Stratification Strategy: For each district and season, the stratification of First Stage Units (FSUs) shall be implemented as follows:

1. **Special Stratum (Zero Animal):** A special stratum shall be formed at the District level comprising of FSUs having no animals as per the census. This stratum shall be allocated 2 to 4 FSUs to capture any new livestock activity.
2. **Regular Stratification:** The remaining FSUs in the district shall be divided into two main strata:
   a) **Stratum 1:** FSUs having at least one rare animal (e.g., Exotic Cattle and/or Sheep and/or pig).
   b) **Stratum 2:** All remaining FSUs.

B. Sub-Stratification: To ensure high-density of livestock population and low-density areas, both being captured, each of the two regular strata (Stratum 1 and Stratum 2) shall be further sub-stratified into two groups based on animal counts:

a) **Sub-Stratum 1:** FSUs having less than 10 livestock animals pertaining to Milk (Cattle, Buffalo, Goat) and Wool (Sheep).

b) **Sub-Stratum 2:** FSUs having at least 10 such livestock animals.

C. Allocation of Sample Size of FSUs for Complete Enumeration: For the Complete Enumeration, the district level total sample size for rural or urban will be allocated over strata/sub-strata in

proportion to the number of villages/urban wards in each stratum and sub-stratum and the total number of villages/urban wards in the district. The stratum x sub-stratum level allocations may be in even numbers to facilitate selection of sample FSUs in the form of 2 independent sub-samples from each sub-stratum.

D. **Detailed Survey Selection:** From the sub-stratified groups defined above, the selection for the Detailed Survey (Yield Estimation) shall be done as follows:

   a) **Selection Logic:** 01 Village and 01 Urban Ward shall be selected per sub-sample from each sub-stratum for each season.

   b) **Total Detailed Sample:** This selection results in a total of 04 villages and 04 urban wards from each main stratum (Stratum 1 and Stratum 2) per sub-sample i.e. 16 villages and urban wards per season for the detailed survey which is 06 villages/urban wards more than the current sampling design.

III. Hamlet Group Selection:

The Committee found the existing method to be sound enough to capture the data. However, the field officials need to be trained adequately so that they understand the concept of hamlet-group formation/ selection.

IV. Estimation Methodology (Meat & Other Parameters)

A. **Meat Commodity:** The committee recommended that the existing formula for estimating number of animals slaughtered, average yield and production of meat commodity at all levels including Households/Butcher Shops/Slaughter Houses and Commercial Poultry Farms may be re-examined preferably by the IASRI to address potential limitations in the current approach and to improve the accuracy and reliability of meat production estimates.

B. **Non-Mandatory Items:** Regarding the estimation of average daily feed consumption for cattle, buffalo and goat and utilization of dung of cattle, buffalo, goat and sheep the Committee recommends that the methodology for these parameters be finalized by conducting the Pilot Study.

V. Schedule for data collection

In addition to the above, the Committee recommended a critical examination of the existing schedule to identify and eliminate redundant or unnecessary items that no longer contribute meaningfully. While dropping any item, a view of the National Accounts Division of the NSO/MoSPI may also be taken about the relevance of such item(s) in the compilation of National Accounts Statistics. By streamlining the schedule, the data collection process can be made more focused, reducing the reporting burden on field functionaries while maintaining the integrity of the survey outcomes. Furthermore, it was suggested that the sequence of the ISS schedule be logically reorganized to improve the ease of data collection, minimize errors, and ensure smoother implementation at the field level. These measures are intended to strengthen the overall effectiveness and operational efficiency of the ISS framework.

VI. Pilot Survey

The Committee also suggested that the modified sample design with deeper stratification may preferably be tested through a Pilot Study with a reasonable sample size in some selected States/districts before its implementation. The pilot study should specifically assess the efficiency of the new design in terms of improvement in precision and consistency of the estimates.

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(i) Hamlet Group formation for detailed survey

The state-wise number of villages/urban wards with hamlet groups formed was presented to the committee.

Number of villages and urban wards having hamlet/sub group formed - 2023-2024 (all three seasons)			
S.No.	**State Name**	**No. of villages having hamlet group**	**No. of urban wards having sub-group**
1	Andaman And Nicobar Islands	10	12
2	Andhra Pradesh	679	480
3	Arunachal Pradesh	8	13
4	Assam	73	30
5	Bihar	1606	923
6	Chandigarh	12	19
7	Chhattisgarh	486	253
8	Dadra and Nagar Haveli and Daman and Diu	28	34
9	Delhi	61	72
10	Goa	36	17
11	Gujarat	1030	575
12	Haryana	702	416
13	Himachal Pradesh	48	45
14	Jammu And Kashmir	369	162
15	Jharkhand	438	407
16	Karnataka	864	723
17	Kerala	945	459
18	Ladakh	6	8
19	Lakshadweep	9	0
20	Madhya Pradesh	918	813
21	Maharashtra	1037	845
22	Manipur	89	53
23	Meghalaya	34	53
24	Mizoram	42	90
25	Nagaland	63	39
26	Odisha	461	469
27	Puducherry	29	38
28	Punjab	624	514
29	Rajasthan	871	795
30	Sikkim	43	24
31	Tamil Nadu	1311	889
32	Telangana	566	380
33	Tripura	285	91
34	Uttar Pradesh	2316	1373
35	Uttarakhand	78	217
36	West Bengal	789	619
Total		**16966**	**11950**

(ii) State-wise sample size of various stages of units

The number of villages and urban wards selected for complete enumeration is 44,607 and 19,482 respectively, while 22,036 villages/urban wards have been selected for detailed survey at the all-India level.

First Stage Unit – Sample Size – 2023-2024 (for all three seasons)				
S.No.	**State Name**	**No. of villages selected for Complete Enumeration**	**No. of urban wards selected for Complete Enumeration**	**No. of villages and urban wards selected for Detailed Survey**
1	Andaman And Nicobar Islands	96	12	90
2	Andhra Pradesh	1448	789	780
3	Arunachal Pradesh	880	27	711
4	Assam	2128	480	990
5	Bihar	2649	1036	1140
6	Chandigarh	12	19	18
7	Chhattisgarh	1736	831	840
8	Dadra and Nagar Haveli and Daman and Diu	40	34	58
9	Delhi	136	136	207
10	Goa	80	50	60
11	Gujarat	1830	613	990
12	Haryana	973	533	660
13	Himachal Pradesh	845	189	360
14	Jammu And Kashmir	881	405	596
15	Jharkhand	1774	480	720
16	Karnataka	2079	1158	900
17	Kerala	1059	565	420
18	Ladakh	62	24	60
19	Lakshadweep	11	0	11
20	Madhya Pradesh	3670	1683	1530
21	Maharashtra	2594	1194	1050
22	Manipur	560	127	470
23	Meghalaya	637	78	330
24	Mizoram	236	115	228
25	Nagaland	348	183	330
26	Odisha	2330	703	900
27	Puducherry	46	73	77
28	Punjab	1231	668	660
29	Rajasthan	2570	1124	990
30	Sikkim	149	42	164
31	Tamil Nadu	1814	1652	1136
32	Telangana	1434	717	990
33	Tripura	291	141	240
34	Uttar Pradesh	5490	2584	2250
35	Uttarakhand	908	337	390
36	West Bengal	1580	680	690
Total		**44607**	**19482**	**22036**

For district-wise analysis, UP State was taken as an example as mentioned in the table below:

Analysis for All-India and the State of U.P.					
Villages			**Urban Wards**		
Total No. of villages selected for complete enumeration	44607	%	Total No. of urban wards selected for complete enumeration	19482	%
No. of villages having In-Milk Exotic Cattle	4162	9.33	No. of urban wards having In-Milk Exotic Cattle	1602	8.22
No. of villages having Sheep	7404	16.60	No. of urban wards having Sheep	1678	8.61
UTTAR PRADESH (DISTRICT WISE)					
Total No. of villages selected for complete enumeration	5490	%	No. of urban wards selected for complete enumeration	2584	%
No. of villages having In-Milk Exotic Cattle	1150	20.94	No. of urban wards having In-Milk Exotic Cattle	401	15.51
No. of villages having Sheep	190	3.46	No. of urban wards having Sheep	37	1.43

State/District wise Analysis

a) No. of villages/Urban wards having Rarer animal/Exotic Cattle

State/UT wise number of villages/wards having a particular animal as per survey in 2023-24					
S. No.	**State Name**	**No. of villages selected for complete enumeration**	**No. of urban wards selected for complete enumeration**	**No. of villages having In-Milk Exotic Cattle**	**No. of urban wards having In-Milk Exotic Cattle**
1	Andaman And Nicobar Islands	96	12	0	0
2	Andhra Pradesh	1448	789	228	75
3	Arunachal Pradesh	880	27	1	0
4	Assam	2128	480	89	17
5	Bihar	2649	1036	65	24
6	Chandigarh	12	19	12	10
7	Chhattisgarh	1736	831	110	74
8	Dadra and Nagar Haveli and Daman and Diu	40	34	10	0
9	Delhi	136	136	28	23
10	Goa	80	50	0	0
11	Gujarat	1830	613	76	13
12	Haryana	973	533	567	200
13	Himachal Pradesh	845	189	29	4
14	Jammu And Kashmir	881	405	96	30
15	Jharkhand	1774	480	76	25
16	Karnataka	2079	1158	26	18
17	Kerala	1059	565	3	0
18	Ladakh	62	24	4	0
19	Lakshadweep	11	0	1	0
20	Madhya Pradesh	3670	1683	300	128
21	Maharashtra	2594	1194	107	37
22	Manipur	560	127	19	12
23	Meghalaya	637	78	0	5
24	Mizoram	236	115	0	0
25	Nagaland	348	183	0	0
26	Odisha	2330	703	46	20
27	Puducherry	46	73	1	0
28	Punjab	1231	668	796	317
29	Rajasthan	2570	1124	13	5
30	Sikkim	149	42	6	1
31	Tamil Nadu	1814	1652	41	25
32	Telangana	1434	717	87	60
33	Tripura	291	141	7	1
34	Uttar Pradesh	5490	2584	1150	401
35	Uttarakhand	908	337	28	34
36	West Bengal	1580	680	140	43
All India		**44607**	**19482**	**4162**	**1602**

b) <u>No. of Villages/ Urban Wards having Sheep</u>

S. No.	State Name	No. of villages selected for complete enumeration	No. of urban wards selected for complete enumeration	No. of villages having Sheep for Wool	No. of urban wards having Sheep for Wool
1	Andaman And Nicobar Islands	96	12	0	0
2	Andhra Pradesh	1448	789	147	45
3	Arunachal Pradesh	880	27	15	0
4	Assam	2128	480	57	6
5	Bihar	2649	1036	11	4
6	Chandigarh	12	19	0	0
7	Chhattisgarh	1736	831	78	10
8	Dadra and Nagar Haveli and Daman and Diu	40	34	1	1
9	Delhi	136	136	0	0
10	Goa	80	50	0	0
11	Gujarat	1830	613	323	56
12	Haryana	973	533	241	48
13	Himachal Pradesh	845	189	207	5
14	Jammu And Kashmir	881	405	713	240
15	Jharkhand	1774	480	266	21
16	Karnataka	2079	1158	1429	472
17	Kerala	1059	565	4	1
18	Ladakh	62	24	48	10
19	Lakshadweep	11	0	0	0
20	Madhya Pradesh	3670	1683	122	22
21	Maharashtra	2594	1194	239	29
22	Manipur	560	127	8	0
23	Meghalaya	637	78	5	1
24	Mizoram	236	115	0	0
25	Nagaland	348	183	1	0
26	Odisha	2330	703	237	19
27	Puducherry	46	73	0	0
28	Punjab	1231	668	70	18
29	Rajasthan	2570	1124	1136	145
30	Sikkim	149	42	20	2
31	Tamil Nadu	1814	1652	960	327
32	Telangana	1434	717	636	123
33	Tripura	291	141	17	12
34	Uttar Pradesh	5490	2584	190	37
35	Uttarakhand	908	337	98	11
36	West Bengal	1580	680	125	13
All India		**44607**	**19482**	**7404**	**1678**

c) % of Villages having Butcher Shops

S. No.	State Name	No. of Villages having Butcher Shops	% of Villages having Butcher Shops	No. of Urban Wards having Butcher Shops	% of Urban Wards having Butcher Shops
1	Andaman And Nicobar Islands	0	0.00	0	0.00
2	Andhra Pradesh	113	7.80	88	11.15
3	Arunachal Pradesh	99	11.25	23	85.19
4	Assam	94	4.42	37	7.71
5	Bihar	128	4.83	81	7.82
6	Chandigarh	6	50.00	6	31.58
7	Chhattisgarh	56	3.23	41	4.93
8	Dadra and Nagar Haveli and Daman and Diu	3	7.50	1	2.94
9	Delhi	26	19.12	32	23.53
10	Goa	4	5.00	1	2.00
11	Gujarat	11	0.60	3	0.49
12	Haryana	13	1.34	23	4.32
13	Himachal Pradesh	7	0.83	7	3.70
14	Jammu And Kashmir	276	31.33	178	43.95
15	Jharkhand	242	13.64	176	36.67
16	Karnataka	218	10.49	343	29.62
17	Kerala	423	39.94	205	36.28
18	Ladakh	0	0.00	3	12.50
19	Lakshadweep	7	63.64	0	0.00
20	Madhya Pradesh	52	1.42	51	3.03
21	Maharashtra	314	12.10	306	25.63
22	Manipur	291	51.96	91	71.65
23	Meghalaya	4	0.63	0	0.00
24	Mizoram	228	96.61	115	100.00
25	Nagaland	35	10.06	75	40.98
26	Odisha	266	11.42	152	21.62
27	Puducherry	9	19.57	13	17.81
28	Punjab	229	18.60	243	36.38
29	Rajasthan	34	1.32	367	32.65
30	Sikkim	11	7.38	15	35.71
31	Tamil Nadu	521	28.72	716	43.34
32	Telangana	268	18.69	172	23.99
33	Tripura	102	35.05	59	41.84
34	Uttar Pradesh	31	0.56	36	1.39
35	Uttarakhand	11	1.21	61	18.10
36	West Bengal	90	5.70	149	21.91
All India		**4222**		**3869**	

d) State/UT wise number of villages/wards having a particular animal as per survey in 2023-24

S.No.	District Name	No. of villages selected for complete enumeration	No. of urban wards selected for complete enumeration	No. of villages having In-Milk Exotic Cattle	No. of Urban Ward having In-Milk Exotic Cattle	No. of villages having Sheep for Wool	No. of Urban Ward having Sheep for Wool	No. of villages having Butcher Shops	No. of Urban Ward having Butcher Shops
1	Agra	80	44	16	13	2	1	2	1
2	Aligarh	80	40	16	7	3	2	0	2
3	Ambedkar Nagar	80	26	18	2	3	0	0	0
4	Amethi	80	28	14	6	0	0	0	0
5	Amroha	80	40	31	5	0	0	0	0
6	Auraiya	75	30	31	7	3	1	0	0
7	Ayodhya	80	30	16	3	4	2	0	0
8	Azamgarh	80	36	20	5	1	0	0	1
9	Baghpat	41	34	22	8	2	1	1	0
10	Bahraich	80	30	11	6	4	2	1	2
11	Ballia	80	40	18	5	1	1	1	1
12	Balrampur	80	30	5	0	2	0	1	0
13	Banda	60	28	6	2	3	0	2	0
14	Barabanki	80	40	12	3	0	0	1	0
15	Bareilly	80	50	11	6	3	0	1	0
16	Basti	80	18	9	3	2	0	1	0
17	Bhadohi	80	28	19	3	5	0	0	0
18	Bijnor	80	50	29	9	0	0	0	0
19	Budaun	80	49	4	1	4	1	0	0
20	Bulandshahr	80	48	41	16	1	0	0	0
21	Chandauli	80	24	14	7	0	0	1	0
22	Chitrakoot	55	23	6	1	5	0	0	1
23	Deoria	80	38	9	5	2	0	0	0
24	Etah	80	37	22	6	1	0	0	1
25	Etawah	60	31	1	1	0	1	0	1
26	Farrukhabad	80	29	6	3	4	0	0	0
27	Fatehpur	80	31	9	2	12	0	0	0

28	Firozabad	79	40	3	2	2	0	0	0
29	Gautam Buddha Nagar	49	26	30	11	1	0	0	1
30	Ghaziabad	40	38	32	14	1	1	1	1
31	Ghazipur	80	32	11	1	0	0	0	0
32	Gonda	80	30	14	2	1	0	0	0
33	Gorakhpur	80	37	40	11	2	1	1	1
34	Hamirpur	48	28	2	1	1	0	0	0
35	Hapur	48	30	47	25	1	0	0	1
36	Hardoi	80	40	1	2	1	0	0	0
37	Hathras	60	34	18	11	6	0	0	0
38	Jalaun	80	40	21	6	5	2	1	0
39	Jaunpur	80	40	16	9	5	1	0	0
40	Jhansi	60	40	1	1	11	1	1	0
41	Kannauj	60	34	32	15	2	0	0	0
42	Kanpur Dehat	80	25	1	1	1	0	0	0
43	Kanpur Nagar	80	40	2	2	4	0	1	4
44	Kasganj	60	37	27	8	2	0	2	3
45	Kaushambi	80	30	1	0	8	1	0	0
46	Kheri	80	40	4	0	1	0	2	2
47	Kushi Nagar	80	32	8	1	0	0	0	1
48	Lalitpur	60	29	0	0	9	2	0	1
49	Lucknow	79	40	7	2	0	0	1	1
50	Maharajganj	80	26	12	8	1	0	2	0
51	Mahoba	43	30	4	2	6	4	3	4
52	Mainpuri	80	31	17	5	1	0	0	0
53	Mathura	60	40	11	1	19	5	0	0
54	Mau	80	40	11	1	0	0	0	1
55	Meerut	59	48	43	21	1	1	1	0
56	Mirzapur	80	30	11	1	1	0	0	0
57	Moradabad	80	40	23	13	0	0	0	0
58	Muzaffarnagar	58	40	27	12	2	1	0	0
59	Pilibhit	80	33	12	2	0	0	0	1
60	Pratapgarh	80	31	12	6	0	0	0	0
61	Prayagraj	80	36	6	3	8	1	0	0
62	Rae Bareli	80	30	6	0	1	0	0	0
63	Rampur	80	40	40	9	0	0	0	0

64	Saharanpur	80	40	44	12	5	0	0	1
65	Sambhal	80	38	4	1	0	0	1	0
66	Sant Kabeer Nagar	80	25	13	4	0	0	0	0
67	Shahjahanpur	80	40	19	3	5	1	0	0
68	Shamli	44	40	27	13	0	1	0	1
69	Shravasti	52	13	1	0	1	0	0	1
70	Siddharth Nagar	80	30	1	0	0	2	0	0
71	Sitapur	80	40	8	0	1	0	0	0
72	Sonbhadra	80	27	5	0	1	0	0	0
73	Sultanpur	80	30	28	6	4	0	1	1
74	Unnao	80	40	18	3	1	0	1	0
75	Varanasi	80	32	13	15	1	0	0	0
Uttar Pradesh		**5490**	**2584**	**1150**	**401**	**190**	**37**	**31**	**36**

APPENDIX-III

For milk production, RSE was calculated w.r.t 3 States (Uttar Pradesh, Rajasthan, Karnataka) - Min and Max RSE for the Animal as well as Production level are calculated.

RSE of No. of In-Milk Animals & Production during 2023-2024

Uttar Pradesh				
State Name	**District Name**	**Year**	**Animal Name**	**RSE No of Animals**
Uttar Pradesh	Amethi	2023-2024	Cattle	0.15
Uttar Pradesh	Kanpur Nagar	2023-2024	Cattle	90.09
State Name	**District Name**	**Year**	**Animal Name**	**RSE Production**
Uttar Pradesh	Pilibhit	2023-2024	Cattle	0.15
Uttar Pradesh	Kanpur Nagar	2023-2024	Cattle	88.85
Rajasthan				
State Name	**District Name**	**Year**	**Animal Name**	**RSE No of Animals**
Rajasthan	Sawai Madhopur	2023-2024	Cattle	0.50
Rajasthan	Sikar	2023-2024	Cattle	48.65
State Name	**District Name**	**Year**	**Animal Name**	**RSE Production**
Rajasthan	Tonk	2023-2024	Cattle	0.20
Rajasthan	Sikar	2023-2024	Cattle	51.56
Karnataka				
State Name	**District Name**	**Year**	**Animal Name**	**RSE No of Animals**
Karnataka	Raichur	2023-2024	Cattle	0.14
Karnataka	Bengaluru Urban	2023-2024	Cattle	74.62
State Name	**District Name**	**Year**	**Animal Name**	**RSE Production**
Karnataka	Kolar	2023-2024	Cattle	0.05
Karnataka	Bengaluru Urban	2023-2024	Cattle	77.10

$$RSE = \frac{Positive\ value\ of(\widehat{R_1} - \widehat{R_2})}{\widehat{R_1} + \widehat{R_2}}$$

$\widehat{R_1}$ ***= Estimates from the sub sample of 1***

$\widehat{R_2}$***= Estimates from the sub sample of 2***

"RSE No of Animals" *contains the value of RSE computed using the above formula for two sub-samples. First, the estimate from Sub-sample 1 is obtained and similarly the estimate from Sub-sample 2 is obtained. Then, the relative difference between these two combined estimates is used to calculate the RSE (in %).*

Comparison of Variance with RSE (MILK)											
Maximum											
State Name	**District Name**	**Year**	**Season**	**Commodity Name**	**Animal Name**	**Group Name**	**No of Animals as per Census**	**Estimated No of Animals**	**Variance**	**Standard Error (%)**	**RSE No of Animals at Sub-Sample level**
Uttar Pradesh	Agra	2023-2024	1	Milk	Cattle	Exotic	22910	11732.49	1057689658	277.19	72.67
Minimum											
State Name	**District Name**	**Year**	**Season**	**Commodity Name**	**Animal Name**	**Group Name**	**No of Animals as per Census**	**Estimated No of Animals**	**Variance**	**Standard Error (%)**	**RSE No of Animals at Sub-Sample level**
Uttar Pradesh	Basti	2023-2024	1	Milk	Cattle	Exotic	3084	3084	0	0	30.94
Maximum											
State Name	**District Name**	**Year**	**Season**	**Commodity Name**	**Animal Name**	**Group Name**	**No of Animals as per Census**	**Estimated No of Animals**	**Variance**	**Standard Error (%)**	**RSE No of Animals at Sub-Sample level**
Uttar Pradesh	Shamli	2023-2024	1	Milk	Buffalo	Non_Descript	1437	1748.799	51655617.21	410.978	90.55

Minimum											
State Name	**District Name**	**Year**	**Season**	**Commodity Name**	**Animal Name**	**Group Name**	**No of Animals as per Census**	**Estimated No of Animals**	**Variance**	**Standard Error (%)**	**RSE No of Animals at Sub-Sample level**
Uttar Pradesh	Fatehpur	2023-2024	1	Milk	Buffalo	Indigenous	83361	210463.094	12913026.98	1.707	95.74

Comparison of RSE with Variance (MILK)										
Maximum										
State Name	**District Name**	**Year**	**Season**	**Animal Name**	**Group Name**	**No of Animals Sub-Sample 1**	**No of Animals Sub- Sample 2**	**RSE No of Animals**	**Variance**	**Standard Error (%)**
Uttar Pradesh	Prayagraj	2023-2024	1	Cattle	Indigenous	81716	253	99.38	30892462.1	6.69
Minimum										
State Name	**District Name**	**Year**	**Season**	**Animal Name**	**Group Name**	**No of Animals Sub-Sample 1**	**No of Animals Sub- Sample 2**	**RSE No of Animals**	**Variance**	**Standard Error (%)**
Uttar Pradesh	Sambhal	2023-2024	1	Cattle	Crossbred	4809	4802	0.07	4196308.391	23.89
Maximum										
State Name	**District Name**	**Year**	**Season**	**Animal Name**	**Group Name**	**No of Animals Sub- Sample 1**	**No of Animals Sub- Sample 2**	**RSE No of Animals**	**Variance**	**Standard Error (%)**
Uttar Pradesh	Prayagraj	2023-2024	1	Buffalo	Indigenous	806377	5812	98.57	1300478086	8.76
Minimum										
State Name	**District Name**	**Year**	**Season**	**Animal Name**	**Group Name**	**No of Animals Sub-Sample 1**	**No of Animals Sub-Sample 2**	**RSE No of Animals**	**Variance**	**Standard Error (%)**
Uttar Pradesh	Amroha	2023-2024	3	Buffalo	Non-Descript	8833	8840	0.03	94468145.2	61.31

Comparison of Variance with RSE (Egg)											
Variance Maximum											
State Name	**District Name**	**Year**	**Season**	**Commodity Name**	**Animal Name**	**Group Name**	**No of Animals as per Census**	**Estimated No of Animals**	**Variance**	**Standard Error (%)**	**RSE No of Animals at Sub-Sample level**
UP	Sitapur	2023-2024	1	Egg	Duck	Desi	926	668.9	389455	93.29	85.09
Minimum											
State Name	**District Name**	**Year**	**Season**	**Commodity Name**	**Animal Name**	**Group Name**	**No of Animals as per Census**	**Estimated No of Animals**	**Variance**	**Standard Error (%)**	**RSE No of Animals at Sub-Sample level**
UP	Shravasti	2023-2024	1	Egg	Duck	Desi	692	679.45	2970.446	8.02	1.83

Comparison of RSE with Variance (Egg)										
Maximum										
State Name	**District Name**	**Year**	**Season**	**Animal Name**	**Group Name**	**No of Layers Sub-Sample 1**	**No of Layers Sub- Sample 2**	**RSE No of Animals at Sub-Sample level**	**Variance**	**Standard Error (%)**
UP	Sitapur	2023-2024	1	Duck	Desi	857	69	85.09	389455	93.29
Minimum										
State Name	**District Name**	**Year**	**Season**	**Animal Name**	**Group Name**	**No of Layers Sub-Sample 1**	**No of Layers Sub- Sample 2**	**RSE No of Animals at Sub-Sample level**	**Variance**	**Standard Error (%)**
UP	Shravasti	2023-2024	1	Duck	Desi	333.5	346	1.83	2970.44	8.02

Comparison of Variance with RSE (Sheep)										
Maximum										
State Name	**District Name**	**Year**	**Season**	**Commodity Name**	**Animal Name**	**No of Animals as per Census**	**Estimated No of Animals**	**Variance**	**Standard Error (%)**	**RSE No of Animals at Sub-Sample level**
Uttar Pradesh	Chitrakoot	2023-2024	1	Wool	Sheep	19683	72536.29	22685228985	207.642	16.07
Minimum										
State Name	**District Name**	**Year**	**Season**	**Commodity Name**	**Animal Name**	**No of Animals as per Census**	**Estimated No of Animals**	**Variance**	**Standard Error (%)**	**RSE No of Animals at Sub-Sample level**
Uttar Pradesh	Jhansi	2023-2024	1	Wool	Sheep	42297	30083.19	5551025.609	7.832	15.64

Comparison of RSE with Variance (Sheep)									
Maximum									
State Name	**District Name**	**Year**	**Season**	**Animal Name**	**No of Animals Sub-Sample 1**	**No of Animals Sub-Sample 2**	**RSE No of Animals at Sub-Sample level**	**Variance**	**Standard Error**
Uttar Pradesh	Lalitpur	2023-2024	3	Sheep	1628	13.33	98.37	209863.18	20.28
Minimum									
State Name	**District Name**	**Year**	**Season**	**Animal Name**	**No of Animals Sub-Sample 1**	**No of Animals Sub-Sample 2**	**RSE No of Animals at Sub-Sample level**	**Variance**	**Standard Error**
Uttar Pradesh	Fatehpur	2023-2024	2	Sheep	26989.5	29187.66	3.91	50910787.31	9.92

APPENDIX-V

Total No. of villages/wards selected for complete enumeration under milk, egg, meat and wool category

a) Milk

Villages			Urban Wards		
Total No. of villages selected for complete enumeration	**44607**	**%**	**Total No. of urban wards selected for complete enumeration**	**19482**	**%**
No. of villages having In-Milk Cattle	41707	93.50	No. of urban wards having In-Milk Cattle	16827	86.37
No. of villages having In-Milk Buffalo	29340	65.77	No. of urban wards having In-Milk Buffalo	11463	58.84
No. of villages having In-Milk Goat	28852	64.68	No. of urban wards having In-Milk Goat	9869	50.65

b) Egg

Villages			Urban Wards		
Total No. of villages selected for complete enumeration	**44607**	**%**	**No. of urban wards selected for complete enumeration**	**19482**	**%**
No. of villages having Duck	6180	13.85	No. of urban wards having Duck	1559	**8**
No. of villages having Fowl	23511	52.71	No. of urban wards having Fowl	7962	**40.87**

c) Meat

Villages			Urban Wards		
No. of villages selected for complete enumeration	**44607**	**%**	**No. of urban wards selected for complete enumeration**	**19482**	**%**
No. of villages which slaughter Cattle	2262	5.07	No. of urban wards which slaughter Cattle	543	2.79
No. of villages which slaughter Buffalo	2335	5.23	No. of urban wards which slaughter Buffalo	884	4.54
No. of villages which slaughter Goat	15489	34.72	No. of urban wards which slaughter Goat	6389	32.79
No. of villages which slaughter Sheep	4829	10.82	No. of urban wards which slaughter Sheep	1859	9.54
No. of villages which slaughter Pig	4859	10.89	No. of urban wards which slaughter Pig	1279	6.57
No. of villages which have poultry meat	12143	27.22	No. of urban wards which have poultry meat	5224	26.81

d) Wool

Villages			Urban Wards		
No. of villages selected for complete enumeration	44607	%	No. of urban wards selected for complete enumeration	19482	%
No. of villages having Sheep for Wool	7404	16.60	No. of urban wards having Sheep for Wool	1678	8.61

APPENDIX-VI

No. of In-Milk Animals during 2021-22 to 2023-24

Sl. No.	State/UTs	No. of In-Milk Animal (000 Nos)				Percentage Change (%)				
		As per Census 2019	2021-22	2022-23	2023-24	2022-23	2023-24	2021-22 over Census 2019	2022-23 over Census 2019	2023-24 over Census 2019
1	Andhra Pradesh	5116.09	5535.02	5589.73	5657.42	0.99%	1.21%	8.19%	9.26%	10.58%
2	Arunachal Pradesh	71.63	79.43	77.99	106.22	-1.81%	36.19%	10.89%	8.88%	48.29%
3	Assam	3535.37	1950.66	1906.44	1695.87	-2.27%	- 11.05%	-44.82%	- 46.08%	- 52.03%
4	Bihar	10098.79	11920.29	12145.30	12908.81	1.89%	6.29%	18.04%	20.26%	27.83%
5	Chhattisgarh	1490.21	2538.91	2653.45	2767.31	4.51%	4.29%	70.37%	78.06%	85.70%
6	Goa	28.56	30.62	30.06	30.73	-1.86%	2.24%	7.23%	5.24%	7.60%
7	Gujarat	8583.96	9283.30	9384.41	9639.86	1.09%	2.72%	8.15%	9.32%	12.30%
8	Haryana	2273.48	3329.43	3326.80	3344.64	-0.08%	0.54%	46.45%	46.33%	47.12%
9	Himachal Pradesh	1183.03	1196.05	1213.34	1228.84	1.45%	1.28%	1.10%	2.56%	3.87%
10	Jammu & Kashmir	3018.62	1530.87	1603.48	1538.10	4.74%	-4.08%	-49.29%	- 46.88%	- 49.05%
11	Jharkhand	4330.94	4465.35	4918.44	5132.12	10.15%	4.34%	3.10%	13.57%	18.50%
12	Karnataka	5753.34	7532.20	6760.27	7162.03	- 10.25%	5.94%	30.92%	17.50%	24.48%
13	Kerala	1001.6	1129.89	1147.60	1149.15	1.57%	0.14%	12.81%	14.58%	14.73%
14	Madhya Pradesh	10871.7	15835.18	16631.85	17337.30	5.03%	4.24%	45.66%	52.98%	59.47%
15	Maharashtra	9937.11	9972.92	10309.15	11082.61	3.37%	7.50%	0.36%	3.74%	11.53%
16	Manipur	55.31	76.04	72.74	64.41	-4.34%	- 11.45%	37.48%	31.51%	16.45%
17	Meghalaya	217.92	142.54	145.47	147.12	2.06%	1.13%	-34.59%	- 33.25%	- 32.49%
18	Mizoram	9.03	11.32	11.14	11.30	-1.54%	1.42%	25.32%	23.39%	25.14%
19	Nagaland	17.8	50.72	38.85	46.21	- 23.39%	18.93%	184.94%	118.29%	159.61%
20	Odisha	3399.55	2276.79	2281.28	2417.15	0.20%	5.96%	-33.03%	- 32.89%	- 28.90%

21	Punjab	2987.38	3672.57	3803.23	3898.72	3.56%	2.51%	22.94%	27.31%	30.51%
22	Rajasthan	16289.95	19437.42	21296.90	22800.15	9.57%	7.06%	19.32%	30.74%	39.96%
23	Sikkim	60.88	41.80	45.44	55.60	8.70%	22.35%	-31.33%	- 25.36%	-8.67%
24	Tamil Nadu	6184.28	7511.34	7625.60	7941.01	1.52%	4.14%	21.46%	23.31%	28.41%
25	Telangana	5159.97	3224.11	3124.66	3196.90	-3.08%	2.31%	-37.52%	- 39.44%	- 38.04%
26	Tripura	280.36	306.96	337.98	351.73	10.11%	4.07%	9.49%	20.55%	25.46%
27	Uttar Pradesh	21753.19	23376.48	22978.24	23563.52	-1.70%	2.55%	7.46%	5.63%	8.32%
28	Uttarakhand	1109.12	1336.19	1336.74	1360.71	0.04%	1.79%	20.47%	20.52%	22.68%
29	West Bengal	8112.56	7097.14	8107.38	8840.63	14.23%	9.04%	-12.52%	-0.06%	8.97%
30	A&N Islands	23.85	25.39	19.80	19.87	- 22.01%	0.34%	6.47%	- 16.97%	- 16.69%
31	Chandigarh	12.15	14.37	13.78	14.32	-4.10%	3.93%	18.25%	13.40%	17.86%
32	Ladakh	181.14	52.38	54.16	77.51	3.39%	43.13%	-71.08%	- 70.10%	- 57.21%
33	Daman & Diu and D&N Haveli		1.20	1.26	1.26	4.64%	0.26%	-	-	-
34	Delhi	139.38	0.00	157.88	157.88	-	0.01%	-	13.27%	13.28%
35	Lakshadweep		1.94	1.92	2.24	-0.97%	16.47%	-	-	-
36	Puducherry	52.08	23.65	23.93	24.01	1.18%	0.34%	-54.59%	- 54.06%	- 53.90%
All India		**133340.33**	**145010.48**	**149176.69**	**155773.27**	**2.87%**	**4.42%**	**8.75%**	**11.88%**	**16.82%**

No. of Egg Laying Birds during 2021-22 to 2023-24 from Backyard source

Sl.No.	State/UTs	No of Birds (000 Nos)				Percentage Change (%)				
		As per Census 2019	2021-22	2022-23	2023-24	2022-23	2023-24	2021-22 over Census 2019	2022-23 over Census 2019	2023-24 over Census 2019
1	Andhra Pradesh	6892.46	14362.50	9765.72	9359.98	-32.01%	-4.15%	108.38%	41.69%	35.80%
2	Arunachal Pradesh	441.83	462.71	461.71	476.81	-0.22%	3.27%	4.73%	4.50%	7.92%
3	Assam	13840.37	5732.23	5567.33	4834.51	-2.88%	- 13.16%	-58.58%	-59.77%	-65.07%
4	Bihar	2898.16	3264.19	3494.06	3437.80	7.04%	-1.61%	12.63%	20.56%	18.62%

5	Chhattisgarh	2082.03	2515.18	2918.65	3124.05	16.04%	7.04%	20.80%	40.18%	50.05%
6	Goa	52.99	49.86	42.88	42.57	-14.00%	-0.73%	-5.90%	-19.07%	-19.66%
7	Gujarat	1220.55	1364.74	1284.29	1254.04	-5.89%	-2.36%	11.81%	5.22%	2.74%
8	Haryana	142.01	198.68	204.35	227.51	2.85%	11.33%	39.90%	43.90%	60.21%
9	Himachal Pradesh	126.18	236.62	227.96	229.98	-3.66%	0.89%	87.53%	80.66%	82.26%
10	Jammu & Kashmir	961.03	1064.17	951.55	975.23	-10.58%	2.49%	10.73%	-0.99%	1.48%
11	Jharkhand	5277.76	7207.87	7850.87	8315.14	8.92%	5.91%	36.57%	48.75%	57.55%
12	Karnataka	4279.91	8529.92	8772.53	9348.47	2.84%	6.57%	99.30%	104.97%	118.43%
13	Kerala	8208.17	11246.51	11183.10	12904.53	-0.56%	15.39%	37.02%	36.24%	57.22%
14	Madhya Pradesh	2532.14	4530.83	4813.83	4947.90	6.25%	2.79%	78.93%	90.11%	95.40%
15	Maharashtra	9643.1	9597.10	9925.89	10942.50	3.43%	10.24%	-0.48%	2.93%	13.47%
16	Manipur	1660.11	1031.22	1046.98	1317.40	1.53%	25.83%	-37.88%	-36.93%	-20.64%
17	Meghalaya	1316.95	990.41	1002.42	1010.79	1.21%	0.83%	-24.79%	-23.88%	-23.25%
18	Mizoram	319.02	373.59	338.29	330.25	-9.45%	-2.38%	17.10%	6.04%	3.52%
19	Nagaland	592.77	312.32	297.77	311.17	-4.66%	4.50%	-47.31%	-49.77%	-47.51%
20	Odisha	4252.84	4526.86	4620.62	4786.64	2.07%	3.59%	6.44%	8.65%	12.55%
21	Punjab	142.28	246.69	200.14	230.98	-18.87%	15.41%	73.38%	40.67%	62.34%
22	Rajasthan	713.24	1383.84	1652.42	2202.47	19.41%	33.29%	94.02%	131.68%	208.80%
23	Sikkim	179.33	100.41	101.38	117.74	0.97%	16.13%	-44.01%	-43.47%	-34.34%
24	Tamil Nadu	7536.07	7371.65	7851.05	7941.93	6.50%	1.16%	-2.18%	4.18%	5.39%
25	Telangana	20.25	5441.45	4578.55	4389.56	-15.86%	-4.13%	26771.37%	22510.12%	21576.84%
26	Tripura	1260.48	2102.36	1440.02	2007.11	-31.50%	39.38%	66.79%	14.24%	59.23%
27	Uttar Pradesh	1520.44	2661.59	2547.45	2285.68	-4.29%	- 10.28%	75.05%	67.55%	50.33%
28	Uttarakhand	367.89	553.95	550.07	600.54	-0.70%	9.17%	50.58%	49.52%	63.24%
29	West Bengal	24246.52	49718.93	65193.00	67695.04	31.12%	3.84%	105.06%	168.88%	179.19%

30	A&N Islands	372.77	574.21	615.16	704.42	7.13%	14.51%	54.04%	65.02%	88.97%
31	Chandigarh	1.09	1.27	1.55	1.88	22.18%	21.47%	16.21%	41.99%	72.48%
32	Ladakh	-	16.82	16.84	23.40	0.08%	38.98%	-	-	-
33	Daman & Diu and D&N Haveli	-	3.98	6.86	6.88	72.23%	0.26%	-	-	-
34	Delhi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	Lakshadweep	60.46	39.04	38.14	34.14	-2.30%	- 10.49%	-35.43%	-36.92%	-43.53%
36	Puducherry	92.48	80.21	86.42	88.01	7.75%	1.84%	-13.27%	-6.55%	-4.83%
All India		**103254**	**147893.91**	**159649.86**	**166507.05**	**7.95%**	**4.30%**	**43.23%**	**54.62%**	**61.26%**

Wool – No. of Sheep during 2021-22 to 2023-24

Sl.No.	State/UTs	No of Animal (Sheep) (Lakhs Nos)				Percentage Change (%)				
		As per Census 2019	2021-22	2022-23	2023-24	2022-23	2023-24	2021-22 over Census 2019	2022-23 over Census 2019	2023-24 over Census 2019
1	Andhra Pradesh	176.27	0.00	0.00	0.00	-	-	-100.00%	-100.00%	-100.00%
2	Arunachal Pradesh	0.07	0.10	0.08	0.06	-12.95%	-28.24%	29.79%	12.99%	-18.92%
3	Bihar	2.13	2.41	2.51	4.15	4.35%	65.24%	12.79%	17.70%	94.49%
4	Chhattisgarh	1.80	1.09	1.04	1.05	-4.69%	0.84%	-39.39%	-42.23%	-41.74%
5	Gujarat	17.87	15.45	15.04	15.47	-2.66%	2.89%	-13.57%	-15.87%	-13.44%
6	Haryana	2.88	3.44	3.35	3.49	-2.45%	4.04%	19.25%	16.33%	21.03%
7	Himachal Pradesh	7.91	7.46	7.45	7.38	-0.22%	-0.91%	-5.68%	-5.89%	-6.74%
8	Jammu & Kashmir	30.67	18.92	19.35	22.45	2.26%	16.04%	-38.31%	-36.92%	-26.80%
9	Jharkhand	6.41	5.12	5.40	4.81	5.31%	-10.86%	-20.09%	-15.85%	-24.98%
10	Karnataka	110.51	13.05	9.96	12.06	-23.68%	21.11%	-88.19%	-90.99%	-89.09%
11	Madhya Pradesh	3.25	3.57	3.45	2.71	-3.35%	-21.38%	9.86%	6.19%	-16.51%
12	Maharashtra	26.80	23.50	23.65	25.21	0.64%	6.60%	-12.33%	-11.77%	-5.94%

13	Punjab	0.86	1.79	1.72	1.85	-3.76%	7.46%	109.07%	101.21%	116.22%
14	Rajasthan	79.04	109.91	98.48	73.41	-10.40%	-25.45%	39.05%	24.59%	-7.12%
15	Sikkim	0.03	0.00	0.00	0.00	-	-	-100.00%	-100.00%	-100.00%
16	Tamil Nadu	45.00	0.01	0.02	0.02	46.53%	3.95%	-99.97%	-99.96%	-99.96%
17	Telangana	190.63	0.00	0.00	0.00	-	-	-100.00%	-100.00%	-100.00%
18	Uttar Pradesh	9.85	9.12	9.19	9.37	0.78%	1.94%	-7.37%	-6.66%	-4.85%
19	Uttarakhand	2.09	2.64	2.62	2.45	-0.90%	-6.53%	26.79%	25.65%	17.45%
20	West Bengal	9.53	5.76	6.16	5.97	6.99%	-3.11%	-39.56%	-35.34%	-37.35%
21	Ladakh	1.99	0.02	0.02	2.04	5.28%	11588.2%	-99.16%	-99.12%	2.77%
22	Assam	3.32	-	-	-	-	-	-	-	-
23	Kerala	0.01	-	-	-	-	-	-	-	-
24	Manipur	0.06	-	-	-	-	-	-	-	-
25	Meghalaya	0.16	-	-	-	-	-	-	-	-
26	Nagaland	0.00	-	-	-	-	-	-	-	-
27	Odisha	12.79	-	-	-	-	-	-	-	-
28	Tripura	0.05	-	-	-	-	-	-	-	-
29	Delhi	0.00	-	-	-	-	-	-	-	-
30	A&N Islands	0.00	-	-	-	-	-	-	-	-
31	Chandigarh	0.00	-	-	-	-	-	-	-	-
32	Mizoram	0.00	-	-	-	-	-	-	-	-
33	Dadra & Nagar Haveli and Daman & Diu	0.00	-	-	-	-	-	-	-	-
34	Lakshadweep	0.00	-	-	-	-	-	-	-	-
35	Puducherry	0.00	-	-	-	-	-	-	-	-
All India		**741.9961**	**223.35**	**209.48**	**193.95**	**-6.21%**	**-7.41%**	**-69.90%**	**-71.77%**	**-73.86%**

APPENDIX-VII

RSE for milk production w.r.t 3 States (Uttar Pradesh, Rajasthan, Karnataka) for the year 2024-25

Uttar Pradesh						
State Name	**District Name**	**Year**	**Season**	**Animal Name**	**RSE No of Animals**	**RSE Production**
Uttar Pradesh	Kushi Nagar	2024-25	Winter	Cattle	0.0511	0.4048
Uttar Pradesh	Fatehpur	2024-25	Winter	Cattle	0.1322	0.4693
Uttar Pradesh	Ambedkar Nagar	2024-25	Winter	Cattle	0.6557	0.4854
Uttar Pradesh	Siddharth Nagar	2024-25	Winter	Cattle	0.1917	0.5010
Uttar Pradesh	Firozabad	2024-25	Winter	Cattle	22.9091	16.3056
Uttar Pradesh	Chandauli	2024-25	Winter	Cattle	16.6452	17.6944
Uttar Pradesh	Sant Kabeer Nagar	2024-25	Winter	Cattle	16.5814	18.1938
Uttar Pradesh	Kasganj	2024-25	Winter	Cattle	20.0028	29.3617
Uttar Pradesh	Etawah	2024-25	Winter	Cattle	48.3423	36.9518
Uttar Pradesh	Kanpur Nagar	2024-25	Winter	Buffalo	1.7393	1.6388
Uttar Pradesh	Unnao	2024-25	Winter	Buffalo	1.1060	1.9441
Uttar Pradesh	Shamli	2024-25	Winter	Buffalo	0.4413	2.1164
Uttar Pradesh	Rampur	2024-25	Winter	Buffalo	0.0073	2.4191
Uttar Pradesh	Bareilly	2024-25	Winter	Buffalo	0.5772	2.9406
Uttar Pradesh	Balrampur	2024-25	Winter	Buffalo	21.3500	21.8481
Uttar Pradesh	Gonda	2024-25	Winter	Buffalo	19.9821	22.1008
Uttar Pradesh	Firozabad	2024-25	Winter	Buffalo	23.9977	22.8740
Uttar Pradesh	Etawah	2024-25	Winter	Buffalo	32.6945	32.4291
Uttar Pradesh	Chandauli	2024-25	Winter	Buffalo	33.5737	34.7999
Uttar Pradesh	Maharajganj	2024-25	Winter	Goat	0.1948	0.1942
Uttar Pradesh	Muzaffarnagar	2024-25	Winter	Goat	2.4922	0.3670
Uttar Pradesh	Meerut	2024-25	Winter	Goat	2.6817	0.9844
Uttar Pradesh	Basti	2024-25	Winter	Goat	1.1185	1.1175
Uttar Pradesh	Pratapgarh	2024-25	Winter	Goat	0.2111	1.2329
Uttar Pradesh	Fatehpur	2024-25	Winter	Goat	0.2271	6.5928
Uttar Pradesh	Hapur	2024-25	Winter	Goat	30.3475	30.3445
Uttar Pradesh	Sant Kabeer Nagar	2024-25	Winter	Goat	33.0827	33.1157
Uttar Pradesh	Etawah	2024-25	Winter	Goat	33.6986	33.6324

Karnataka						
State Name	**District Name**	**Year**	**Season**	**Animal Name**	**RSE No of Animals**	**RSE Production**
Karnataka	Gadag	2024-25	Winter	Goat	22.1105	6.6803
Karnataka	Koppal	2024-25	Winter	Goat	10.4555	10.4563
Karnataka	Belagavi	2024-25	Winter	Goat	14.0309	17.8346
Karnataka	Raichur	2024-25	Winter	Goat	22.2439	22.2424
Karnataka	Chikkaballapura	2024-25	Winter	Goat	29.9135	22.3044
Karnataka	Kalaburagi	2024-25	Winter	Goat	51.1064	55.8031
Karnataka	Bijapur	2024-25	Winter	Goat	50.0804	57.4730
Karnataka	Dharwad	2024-25	Winter	Goat	61.5287	60.6295
Karnataka	Chitradurga	2024-25	Winter	Goat	66.2114	62.8618
Karnataka	Dakshina Kannada	2024-25	Winter	Goat	86.8162	85.1472
Karnataka	Bagalkote	2024-25	Winter	Buffalo	2.3765	4.1659
Karnataka	Ballari	2024-25	Winter	Buffalo	6.5802	4.4713
Karnataka	Uttara Kannada	2024-25	Winter	Buffalo	5.0457	5.5136
Karnataka	Chikkamagaluru	2024-25	Winter	Buffalo	8.4225	5.8306
Karnataka	Dharwad	2024-25	Winter	Buffalo	8.3939	6.8851
Karnataka	Gadag	2024-25	Winter	Buffalo	19.0345	41.1162
Karnataka	Hassan	2024-25	Winter	Buffalo	45.3935	41.6490
Karnataka	Chitradurga	2024-25	Winter	Buffalo	44.6145	43.9833
Karnataka	Kolar	2024-25	Winter	Buffalo	47.6243	47.9696
Karnataka	Shivamogga	2024-25	Winter	Buffalo	55.8322	58.1171
Karnataka	Dharwad	2024-25	Winter	Cattle	8.4896	0.8755
Karnataka	Koppal	2024-25	Winter	Cattle	4.0065	1.1268
Karnataka	Tumakuru	2024-25	Winter	Cattle	13.6336	1.9510
Karnataka	Belagavi	2024-25	Winter	Cattle	6.8839	2.8793
Karnataka	Chamarajanagara	2024-25	Winter	Cattle	10.4821	5.6404
Karnataka	Dakshina Kannada	2024-25	Winter	Cattle	20.3296	32.8620
Karnataka	Gadag	2024-25	Winter	Cattle	35.8593	49.6469
Karnataka	Kolar	2024-25	Winter	Cattle	49.1685	51.5077
Karnataka	Bidar	2024-25	Winter	Cattle	65.9001	58.9227

Rajasthan						
State Name	**District Name**	**Year**	**Season**	**Animal Name**	**RSE No of Animals**	**RSE Production**
Rajasthan	Bundi	2024-25	Winter	Cattle	1.185	0.028
Rajasthan	Banswara	2024-25	Winter	Cattle	8.309	0.324
Rajasthan	Ajmer	2024-25	Winter	Cattle	8.587	0.782
Rajasthan	Hanumangarh	2024-25	Winter	Cattle	2.233	0.955
Rajasthan	Bharatpur	2024-25	Winter	Cattle	24.832	24.243
Rajasthan	Rajsamand	2024-25	Winter	Cattle	17.509	25.083
Rajasthan	Sikar	2024-25	Winter	Cattle	26.055	29.501
Rajasthan	Jaisalmer	2024-25	Winter	Cattle	42.173	40.727
Rajasthan	Nagaur	2024-25	Winter	Buffalo	0.893	0.063
Rajasthan	Jhunjhunu	2024-25	Winter	Buffalo	0.352	0.612
Rajasthan	Dungarpur	2024-25	Winter	Buffalo	1.141	1.430
Rajasthan	Bundi	2024-25	Winter	Buffalo	1.191	1.619
Rajasthan	Jaipur	2024-25	Winter	Buffalo	26.156	26.280
Rajasthan	Dholpur	2024-25	Winter	Buffalo	36.866	35.517
Rajasthan	Rajsamand	2024-25	Winter	Buffalo	36.124	38.657
Rajasthan	Bikaner	2024-25	Winter	Buffalo	42.773	45.746
Rajasthan	Tonk	2024-25	Winter	Goat	0.639	1.680
Rajasthan	Hanumangarh	2024-25	Winter	Goat	2.240	2.485
Rajasthan	Banswara	2024-25	Winter	Goat	3.043	3.969
Rajasthan	Pali	2024-25	Winter	Goat	0.025	4.983
Rajasthan	Bharatpur	2024-25	Winter	Goat	37.756	31.451
Rajasthan	Kota	2024-25	Winter	Goat	16.463	31.625
Rajasthan	Dausa	2024-25	Winter	Goat	30.946	32.686
Rajasthan	Churu	2024-25	Winter	Goat	33.776	32.956
Rajasthan	Jaipur	2024-25	Winter	Goat	31.349	34.762
Rajasthan	Alwar	2024-25	Winter	Goat	43.541	36.753

APPENDIX-VIII

List of Meetings and Consultations Held

S.No.	Meeting	Date	Venue	Chairman
1.	1st EC Meeting	22-05-2024	Chanderlok Building, New Delhi	Dr. G.C. Manna (Ex DG, M/o Statistics & PI)
2.	2nd EC Meeting	28-08-2024	Chanderlok Building, New Delhi	
3.	Stakeholders Meeting	21-01-2025	Chanderlok Building, New Delhi	Sh. Jagat Hazarika, Advisor, Statistics, AHS Division
4.	3rd EC Meeting	19-02-2025	Chanderlok Building, New Delhi	Dr. G.C. Manna (Ex DG, M/o Statistics & PI)
5.	4th EC Meeting	28-03-2025	Chanderlok Building, New Delhi	
6.	5th EC Meeting	24-25 April, 2025	Puri, Orissa	

APPENDIX-IX

Minutes of Meetings and Consultations Held

T-12018/2/2021-AHS_DADF
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मत्स्य पालन,पशुपालन और डेयरी मंत्रालय
Ministry of Fisheries, Animal Husbandry & Dairying
पशुपालन और डेयरी विभाग/Department of Animal Husbandry & Dairying
(पशुपालन सांख्यिकी प्रभाग / Animal Husbandry Statistics Division)

चंद्र लोक बिल्डिंग, दूसरी मंजिल/Chandra Lok Building, 2nd floor,
36 जनपथ रोड/36 Janpath Road,
नई दिल्ली/ New Delhi-110001

Dated: 28.06.2024

Subject: Minutes of the Meeting of Expert Committee on Integrated Sample Survey (ISS) Methodology-reg.

The undersigned is directed to circulate herewith the minutes of the meeting of Expert Committee on **"Integrated Sample Survey" (ISS)** methodology held on 22.05.2024 at committee hall, Chanderlok Building, Janpath, New Delhi.

B Kumar 28.06.2024

(Bunti Kumar)
Assistant Director

Distribution:

1. All members of the Expert Committee.

Copy to:

1. PS to Advisor (Stats).

Government of India
Ministry of Fisheries, Animal Husbandry & Dairying
Department of Animal Husbandry & Dairying
(Animal Husbandry Statistics Division)

MINUTES OF THE MEETING OF EXPERT COMMITTEE ON INTEGRATED SAMPLE SURVEY (ISS) METHODOLOGY HELD ON 22.05.2024 AT COMMITTEE HALL, CHANDERLOK BUILDING, JANPATH, NEW DELHI.

The first meeting of Expert Committee on Integrated Sample Survey (ISS) Scheme was held at Chanderlok Building, New Delhi on 22.05.2024 under the Chairmanship of Dr. G.C. Manna, (Ex DG, M/o Statistics & PI). List of members/other participants who attended the meeting is placed at **Annexure -I.**

2. The meeting was conducted to review;

i) The existing Sample Size and frame of the ISS.
ii) The existing Sampling Method & Selection Procedure of ISS.
iii) The existing Methodology for Estimation of Major Livestock Products.
iv) The existing Schedules for Data collection on production of Milk, Egg, Meat and Wool and its coverage
v) Any other issues related to Integrated Sample Survey.

3. At the outset, Member Secretary/Director (AHS) welcomed all the participants to the meeting.

4. The Chairman, thereafter, started the meeting by welcoming the participants. **While expressing his concern about the non-participation of any representative from SDRD of MoSPI in the meeting, the Chairman desired that their presence in the future meetings may be ensured for taking appropriate decisions on the modification of the survey methodology of the ISS.**

5. Thereafter, a brief overview of ***"Integrated Sample Survey"*** (ISS) including its existing methodology, sample size, observations of Technical Committee for Directions etc. was presented before the Expert Committee by Animal Husbandry Statistics Division, DAHD.

6. Deliberations and decisions of the meeting are as follows:

Issues with Slaughterhouse:

- It was discussed that in many cases the number of animals slaughtered is more than the number of animals present in the state. This is usually happening during festive occasion. An example of Kerela was given where during the time of festival of Eid, animals from across the border are brought in to be slaughtered.
- It was contemplated whether this issue needs to be tackled or not, since this practice makes the consumption numbers greater than production numbers.
- Due to this practice, the Gross Value Added (GVA) of the particular state gets affected because the output is high and accounted for while the corresponding input is not accounted for.

Issues with the Sampling Framework:

- The villages that did not report any animals in the previous census are being excluded from the sampling frame. Since there can be addition of animals in such villages in the years after Livestock Census, it was suggested that a thin sample of such villages may possibly be added.
- Only registered slaughterhouses are being included in the frame for sampling. The unorganized slaughterhouses are being covered in the category of butcher house.
- A point was made regarding the adequacy of the sample size particularly for the state level estimation.
- Inclusion of rare breeds (and particularly those with high yield rate) in adequate number was emphasized. A submission was made about the feasibility of improved stratification of villages based on the presence of such rare breeds.
- The procedure of sampling of units was also briefly discussed and it was decided to have a more detailed discussion on this in the next meeting.
- The provision for identifying the productive cluster based on the cluster guidelines of NITI Aayog in the Integrated Sample Survey (ISS) was also highlighted and discussed in details.
- It was suggested that at the lowest sampling level, one household with the maximum Livestock was sampled along with the other randomly chosen one.
- A submission was made as to whether the frame for the ISS may also be drawn by dividing the strata into two viz., a) the villages having at least two ordinary livestock, instead of one, as per the latest livestock census, b) the villages having at least one exotic/ rare and economically important livestock, as per the latest

livestock census. with a higher (90%) allocation to the first stratum and the remaining (10%) allocation to the second stratum.

- There was a suggestion to adopt Probability Proportion to Size (PPS) sampling for the selection of sample.
- For further fruitful discussion on the non-availability of livestock in the first automatically selected hamlet, the relevant tabulation may be done for, less than 5 hamlets, 5-10, 11-25, 26-35, and 36 and above.

State Specific Issues:

- State representatives from Maharashtra highlighted that the Brihanmumbai Municipal Corporation (BMC) is entirely an urban ward and therefore sampling of villages is difficult there. They further conveyed that a substantial population would have migrated owing to rapid urbanization.

- They, therefore, suggested that a provision is to be made for replacement and substitution of sample villages.

7. The Committee desired that information on (i) Hamlet Group formation for detailed survey, (ii) State wise key estimates and their RSE, (iii) A comparative statement of no. of animals in production as per latest survey and as per 20th Livestock Census and (iv) State-wise sample size of various stages of units may be presented in the next meeting. Further, the AHS Division may carry out some analysis on the feasibility of using some of the auxiliary information collected in the ISS scheme which are not at present a part of the report or are being used elsewhere for further discussion on the issues in the next meeting. The next meeting may be scheduled in the last part of June, 2024.

The meeting concluded with the vote of thanks to the Chair.

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Annexure - I

LIST OF THE PARTICIPANTS OF THE MEETING OF EXPERT COMMITTEE TO REVIEW THE EXISTING METHODOLOGY OF "ISS" ON 22ND MAY, 2024.

The Committee/ representatives

1. Dr. G.C. Manna, Ex. DG, MoSPI
2. Shri Hiranya Borah, Ex. DDG, D/o of Drinking Water & Sanitation
3. Dr. Neelam Patel, Senior Adviser, Agriculture & Allied Sector, NITI Aayog
4. Shri Jagat Hazarika, Adviser (Statistics), DAHD
5. Dr. Rajender Parsad, Director, ICAR-IASRI
6. Ms. Shobhra Sarkar, DDG, NAD, MoSPI
7. Dr. Abhay G. Bhatt, Faculty, Indian Statistical Institute (ISI), Delhi
8. Dr. Yograj Tamang, Director, AHD, Govt. of West Bengal
9. Dr. M.I. Khan, Joint Director, AHD, Govt. of Uttar Pradesh
10. Dr. Ch. Srinivasa Raju, Joint Director, AHD, Govt. of Andhra Pradesh
11. Dr. B. P Patil, Assistant Commissioner, AHD, Govt. of Maharashtra
12. Shri V.P. Singh, Director, DAHD

Others participants

1. Shri P.K. De, Consultant, DAHD
2. Dr. Sanjeev Sharma, Deputy Director, AHD, Govt. of Uttar Pradesh
3. Dr. K. Harshavardhan, Deputy Director, AHD, Govt. of Andhra Pradesh
4. Shri K. Mohan Chand, Statistical Investigator, AHD, Govt. of Andhra Pradesh
5. Shri Chet Ram Meena, Deputy Director, DAHD
6. Ms. Shraddha Pal, Assistant Director, DAHD
7. Shri Bunti Kumar, Assistant Director, DAHD
8. Shri Mukesh Dutt Sharma, Assistant Director, DAHD
9. Shri Sunil Kumar, SSO, DAHD

Government of India
Ministry of Fisheries, Animal Husbandry & Dairying
Department of Animal Husbandry & Dairying
(Animal Husbandry Statistics Division)

MINUTES OF THE 2ND MEETING OF EXPERT COMMITTEE TO REVEIEW THE EXISTING METHODOLOGY OF INTEGRATED SAMPLE SURVEY (ISS) SCHEME HELD ON 28.08.2024 AT COMMITTEE HALL, CHANDERLOK BUILDING, JANPATH, NEW DELHI.

The Second meeting of Expert Committee to review the existing methodology of Integrated Sample Survey (ISS) Scheme was held at Chanderlok Building, New Delhi on 28.08.2024 under the Chairmanship of Dr. G.C. Manna, Ex DG, M/o Statistics & PI. List of the Members & other participants is placed at Annexure -I.

2. At the outset, Member Secretary/Director (AHS) welcomed all the participants to the meeting. The purpose of holding the meeting was also briefly described in his welcome address.

3. The Chairman, thereafter, started the meeting by welcoming the participants also expressed his concern of late holding the meeting and less participants.

4. Action taken report of the last meeting of the committee was presented before the Committee by the AHS Division in details including all the relevant information requested in the first meeting. District-wise Relative Standard Error (RSE) of Major Livestock Products (MLP) by using data collected through ISS was also discussed in detail.

5. The deliberations and decisions of the meeting are as follows: -

i. AHS Division may explore the possibility of stratifications of the villages on the basis of availability of the butcher shop and also of the rarer animals / exotic cattle breeds to improve the related estimates. Two separate stratum may be formed one with the villages having at least one butcher shop other one with the villages having rarer animals / exotic cattle breeds using latest available data of Livestock Census and ISS.

ii. RSEs for in-Milk Animals and Milk productions are to be generated for all the animals and separately for cattle and buffalo at state level as well as at district level. Similarly, RSE are also to be generated for estimated number of animals and their products like - Egg, Meat, Wool.

iii. One or two States may be requested to further verify the number of animals in those villages, where it was found either too high or too low in the Complete Enumeration Survey of year 2023-24 in comparison to the corresponding 20th LC data.

iv. For items in respect of which, data have been collected but not used for reporting, the Committee suggested the DAHD for stakeholders' consultation first and thereafter proceedings may be placed before the Committee for reviewing.

v. State wise no. of villages having sheep/not having sheep, having in- milk cattle/having not in-milk cattle and similarly for other animals are to be generated and the same may be placed before the Committee in the next meeting.

vi. The existing schedule for data collection under ISS is may be shown to the Committee in next meeting.

vii. The relevant papers of the meeting to be circulated to all the members well in advance so that members have sufficient time to prepare and discuss.

viii. Next meeting may be scheduled in mid-October, 2024.

The meeting concluded with the vote of thanks to the Chair.

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Annexure - I

LIST OF THE PARTICIPANTS OF THE 2ND MEETING OF EXPERT COMMITTEE TO REVIEW THE EXISTING METHODOLOGY OF "ISS" ON 28TH AUGUST 2024.

The Committee/ representatives

1. Dr. G.C. Manna, Ex. DG, MoSPI
2. Shri Hiranya Borah, Ex. DDG, D/o of Drinking Water & Sanitation
3. Shri Jagat Hazarika, Adviser (Statistics), AHS, DAHD
4. Dr. Rajender Parsad, Director, ICAR-IASRI
5. Dr. Tauqeer Ahmed, Head of Division (ISS), ICAR-IASRI
6. Dr. Prachi Misra Sahoo, Principal Scientist (ISS), ICAR-IASRI
7. Dr. Abhay G. Bhatt, Faculty, Indian Statistical Institute (ISI), Delhi
8. Shri V.P. Singh, Director, AHS, DAHD
9. Shri Manish Bindal, Deputy Director, NAD, MoSPI

Joined Virtually

1. Dr. Ch. Srinivasa Raju, Joint Director, AHD, Govt. of Andhra Pradesh
2. Dr. B. P Patil, Assistant Commissioner, AHD, Govt. of Maharashtra
3. Dr. Monya Kato Jini, Deputy Director, AHV, Arunachal Pradesh
4. Dr. Jignesh Shah, NDDB, Anand, Gujarat

Other participants

1. Shri P.K. De, Consultant, AHS, DAHD
2. Ms. Shraddha Pal, Deputy Director, AHS, DAHD
3. Shri Bunti Kumar, Assistant Director, AHS, DAHD
4. Shri Sunil Kumar, SSO, AHS, DAHD
5. Shri Simardeep Singh, EY

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36 जनपथ रोड/36 Janpath Road,
नई दिल्ली/ New Delhi-110001

Dated: 05.03.2025

Subject: Minutes of the Meeting of Expert Committee to review the existing methodology of scheme on Integrated Sample Survey (ISS)-reg.

The undersigned is directed to circulate herewith the minutes of the meeting of Expert Committee on **"Integrated Sample Survey" (ISS)** methodology held on **19.02.2025** at committee hall, Chanderlok Building, Janpath, New Delhi.

R Singh
05.03.2025

(Karanveer Singh)
Assistant Director

Distribution:

1. The Chairman of the Expert Committee
2. All the members of the Expert Committee.

Copy to:

1. PPS to Secretary, DAHD, New Delhi.
2. PS to Advisor (Stats), DAHD, New Delhi.

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Ministry of Fisheries, Animal Husbandry &Dairying
Department of Animal Husbandry & Dairying
(Animal Husbandry Statistics Division)

MINUTES OF THE 3RD MEETING OF EXPERT COMMITTEE TO REVEIEW THE EXISTING METHODOLOGY OF INTEGRATED SAMPLE SURVEY (ISS) SCHEME HELD ON 19.02.2025 AT COMMITTEE HALL, CHANDERLOK BUILDING JANPATH, NEW DELHI.

The Third meeting of Expert Committee to review the existing methodology of Integrated Sample Survey (ISS) Scheme was held at Chanderlok Building, New Delhi on 19.02.2025 under the Chairmanship of Dr. G.C. Manna, Ex DG, M/o Statistics & PI. The list of the Members & other participants is placed at **Annexue -I.**

2. At the outset, Advisor (Statistics), DAHD welcomed all the participants to the meeting. The purpose of holding the meeting was also briefly described in his welcome address. He also apprised the Committee about the meeting and recommendations of stakeholders' consultation held on January 21, 2025.

3. The Chairman, thereafter, started the meeting by welcoming the participants also expressed his concern of late holding the meeting. He anticipated 2-3 more meetings to discuss and finalize the issues related to existing sampling methodology and invited suggestions from all the Members for bringing the improvement of existing methodology of ISS.

4. Thereafter, action taken report of the last meeting of the Committee was presented by the AHS Division in details including all the relevant information desired by the Committee in its second meeting.

The deliberations and decisions of the meeting are:

i. As it was observed that there is a high variation in RSE over the districts with RSEs derived based on the sub-sample wise estimates, the Relative Standard Error (RSE) for the number of animals and production may also be calculated using the sampling variance formula for further comparison and arrive at conclusion.

[Action: IASRI/AHS]

ii. To identify trends in livestock data, such as milk, egg, and wool production, the Committee suggested to calculate a comparative analysis for the past three years.

[Action: AHS]

iii. To obtain reliable estimates for the items against the data being collected, for which estimations have not yet been generated, a proper estimation procedure needs to be developed and placed before the Committee for its consideration.

[Action: IASRI/AHS]

iv. For certain items like production of milk from rarer animals and meat production from butcher shop etc. appropriate sampling frame may be developed from the existing frame of villages/wards having at least one animal as per 2019 livestock census. It was felt that there is no data on butcher shop in the livestock census data. Division may examine the same and place the facts before the Committee in the next meeting.

[Action: AHS]

v. As the time gap was longer between first two meetings of the Committee and third meeting, the existing data collection methodology should be circulated again to all the members to recollect and refer the same before the next meeting of the Committee.

[Action: AHS]

vi. The existing schedule for data collection under ISS and Livestock Census may be shown to the Committee in next meeting.

[Action: AHS]

vii. In order to assess & understand the data produced from ISS, item-wise estimation and released tables of latest Basic Animal Husbandry Statistics may be presented before the Committee in the next meeting.

[Action: AHS]

viii. Next meeting may be scheduled in 3rd week of March, 2025

[Action: IASRI/AHS]

The meeting concluded with the vote of thanks to the Chair.

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ANNEXURE-I

LIST OF THE PARTICIPANTS OF THE 3RD MEETING OF EXPERT COMMIT"TEE TO REVEIEW THE EXISTING METHODOLOGY OF INTEGRATED SAMPLE SURVEY (ISS) SCHEME HELD ON 19.02.2025.

The Committee/ representatives

1. Dr. G.C. Manna. Ex. DG, MoSPI
2. Shri Hiranya Borah, Ex. DDG, D/o of Drinking Water & Sanitation
3. Shri Jagat Hazarika, Adviser (Statistics), DAHD, New Delhi
4. Dr. Tauqeer Ahmed, Head of Division (ISS), ICAR-IASRI
5. Dr. Prachi Misra Sahoo, Principal Scientist (ISS), ICAR-IASRI
6. Shri V.P. Singh, Director, AHS, DAHD
7. Dr. Anil Kumar, Principal Scientist, ICAR-NIAP, New Delhi.
8. Dr. Sanjeev Sharma, Deputy Director, AHD, Uttar Pradesh.
9. Shri Javed Ahmad, ASO, AHD, Uttar Pradesh.

Joined Virtually

1. Dr. Rajendra Prasad, Director, ICAR-IASRI, New Delhi.
2. Dr. Srinivasa Raju, Joint Director, AHD, Govt. of Andhra Pradesh
3. Dr. B. P Patil, Deputy Commissioner, AHD, Govt. of Maharashtra
4. Dr. Sarvesh Kumar, NDDB, Anand, Gujarat

Other participants

1. Ms. Priyanka Kumari, Deputy Director, M/o Agriculture and Farmers Welfare.
2. Shri Karanveer Singh, Assistant Director, AHS, DAHD
3. Shri Sunil Kumar, SSO, AHS, DAHD
4. Dr. Manjisha Sinha, Consultant, NITI Aayog, New Delhi
5. Dr. Latika, YP, AHS, DAHD

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पशुपालन और डेयरी विभाग/Department of Animal Husbandry & Dairying

(पशुपालन सांख्यिकी प्रभाग / Animal Husbandry Statistics Division)

चंद्र लोक बिल्डिंग, दूसरी मंजिल/Chandra Lok Building, 2nd floor,

36 जनपथ रोड/36 Janpath Road,

नई दिल्ली/ New Delhi-110001

Dated: 15.04.2025

Subject: Minutes of the 4th meeting of Expert Committee on Integrated Sample Survey (ISS) Methodology-reg.

The undersigned is directed to circulate herewith the Minutes of the 4th meeting of Expert Committee on **"Integrated Sample Survey" (ISS)** methodology held on **28.03.2025** at Committee Hall, Chanderlok Building, Janpath, New Delhi.

R Singh 15.04.2025

(Karanveer Singh)
Assistant Director

Distribution:

1. The Chairman of the Expert Committee.
2. All the members of the Expert Committee.

Copy to:-

1. PPS to Secretary DAHD, New Delhi.
2. PS to Advisor (Stats.), DAHD, New Delhi.

DEPARTMENT OF ANIMAL HUSBANDRY & DAIRYING
(ANIMAL HUSBANDRY STATISTICS DIVISION)

MINUTES OF THE 4TH MEETING OF EXPERT COMMITTEE TO REVEIEW THE EXISTING METHODOLOGY OF INTEGRATED SAMPLE SURVEY (ISS) SCHEME HELD ON 28.03.2025 AT COMMITTEE HALL, CHANDERLOK BUILDING JANPATH, NEW DELHI.

The Fourth meeting of Expert Committee to review the existing methodology of Integrated Sample Survey (ISS) Scheme was held at Chanderlok Building, New Delhi on 28.03.2025 under the Chairmanship of Dr. G.C. Manna, Ex DG, M/o Statistics & PI. The list of the Members & other participants is placed at **Annexure -I.**

2. At the outset, Director, DAHD welcomed all the participants and briefed about purpose of the meeting. Then the meeting was started with a brief introduction of the participants.

3. The Chairman, thereafter, welcomed all the participants. He then highlighted the pending activities of the Committee including the necessity for preparation of the draft report of the committee as early as possible considering the fact that the extended tenure of the Committee is till the 30th of April 2025. To have a thorough discussion of the pending activities, he proposed two days' dedicated meeting towards the end of the April, 2025 so that the draft report can be prepared taking into consideration the discussions / decision in the next meeting.

4. Thereafter, the action taken on the recommendations of the previous EC meeting was presented by the AHS Division in details including all the relevant information desired by the Committee in its second meeting. There was a lack of clarity in the last meeting as to whether the information on 'slaughter house' is being collected in the Livestock Census or not. Adviser (Statistics) clarified that the same is part of the data collection of Livestock Census and the information, if required, will be available for further stratification in the context of estimation of meat production.

5. The deliberations and decisions of the meeting are:

i. As indicated in the comparative analysis, for the number of animals, the Relative Standard Error (RSE) based on the estimates of Sub-sample 1 and Sub-sample 2, along with the same computed using the sampling variance formula, was evaluated for larger states such as Uttar Pradesh, Rajasthan, and Karnataka. It was observed that the estimated values were very low, while the variance was notably high. In light of these findings, the Committee recommended that a similar analytical exercise may also be carried out and findings made available in respect of some smaller States and Union Territories such as Goa, Chandigarh, and Puducherry, for both the number of animals as well as for production. The objective is to assess whether similar issues of low estimated values and high variance are also present in these regions. This analysis will help in assessing whether the current methodology including the method of stratification and the sample size are adequate or if adjustments are needed to enhance the precision of the estimates. **[Action: IASRI/AHS]**

ii. It was also felt appropriate to further stratify the villages/wards within a district by taking into consideration the availability of rare animals (exotic cattle, crossbred animal, etc.). Depending upon the sample size, each such stratum can be further sub-stratified based on the total number of animals in each village/ward within the stratum. In other words, the deep stratification may be attempted for improved estimates of different categories of species/ breeds. As per the existing methodology, the sample of villages / wards is drawn from among those villages/wards having at least one animal as per the previous livestock census. In this context, the committee recommended the formation of a special stratum (at the State/UT level) comprising the villages/wards having no animal as per the previous census. **[Action: IASRI/AHS]**

iii. The existing procedure for the selection of Hamlet Groups was also discussed in detail. The Committee found that the instruction given in this regard is sound enough and consistent with other surveys of the Government. However, the same may be presented in detail during the next meeting for further recommendation in this regard, if necessary. **[Action: IASRI/AHS]**

iv. Estimation methodology for items which were not mandatory like total Cultivated area, Area under fodder crops, Location and distance to the nearest veterinary services facilities, any outbreak of diseases of Livestock/Poultry during the last season, use of milk produced (for self-consumption, sale as liquid milk, for selling milk products), Details of average daily feed consumption during last 30 days, Details of utilization of Cow, Buffalo, Goat milk produced, Utilization of dung of Cow, Buffalo, Goat and Sheep, Production purchase and disposal of egg in the ISS data collection schedule in earlier survey and made compulsory now onwards was also brought to the discussion of the Committee. In order to derive reliable and robust estimates for those items where data is currently being collected and for which estimations have not yet been generated, it is essential to design a well-structured and scientifically sound estimation procedure. Accordingly, ICAR-IASRI was assigned to develop an appropriate methodology for these optional items. ICAR-IASRI apprised the Committee that the methodological development could be commenced, once the data for these items are available. So, it will be appropriate that it is developed after the data of these items for the year 2025–26 are available. **[Action: IASRI/AHS]**

6. It was tentatively decided to hold the next meeting on **24th–25th April, 2025.**

The meeting concluded with the vote of thanks to the Chair.

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ANNEXURE-I

LIST OF THE PARTICIPANTS OF THE 4TH MEETING OF EXPERT COMMITTEE TO REVEIEW THE EXISTING METHODOLOGY OF INTEGRATED SAMPLE SURVEY (ISS) SCHEME HELD ON 28.03.2025

The Committee/ representatives

1. Dr. G.C. Manna, Ex. DG, MoSPI
2. Shri Hiranya Borah, Ex. DDG, D/o of Drinking Water & Sanitation
3. Shri Jagat Hazarika, Adviser (Statistics), DAHD, New Delhi
4. Dr. Subhra Sarkar, DDG, NAD, MoSPI, Delhi
5. Dr. Tauqeer Ahmed, Head of Division (ISS), ICAR-IASRI
6. Dr. Prachi Misra Sahoo, Principal Scientist (ISS), ICAR-IASRI
7. Shri V.P. Singh, Director, AHS, DAHD
8. Dr. Anil Kumar, Principal Scientist, ICAR-NIAP, New Delhi.
9. Dr. Khem Chand, Principal Scientist, ICAR-NIAP, New Delhi.
10. Dr. Sanjeev Sharma, Deputy Director, AHD, Uttar Pradesh.

Joined Virtually

1. Shri C. Sen, Joint Commissioner, DAHD, Delhi
2. Dr. Srinivasa Raju, Joint Director, AHD, Govt. of Andhra Pradesh
3. Dr. Sushma Jadhav, Joint director, AHD, Govt. of Maharashtra
4. Dr. B. P Patil, Deputy Director, AHD, Govt. of Maharashtra
5. Dr. Sarvesh Kumar, NDDB, Anand, Gujarat

Other participants

1. Shri Karanveer Singh, Assistant Director, AHS, DAHD
2. Dr. Latika, VP, AHS, DAHD

T-12018/2/2021-AHS_DADF

भारत-सरकार / Government of India

मत्स्य पालन,पशुपालन और डेयरी मंत्रालय

Ministry of Fisheries, Animal Husbandry & Dairying

पशुपालन और डेयरी विभाग/Department of Animal Husbandry & Dairying

(पशुपालन सांख्यिकी प्रभाग / Animal Husbandry Statistics Division)

चंद्र लोक बिल्डिंग, दूसरी मंजिल/Chandra Lok Building, 2nd floor,
36 जनपथ रोड/36 Janpath Road,
नई दिल्ली/ New Delhi-110001

Dated: 21.05.2025

Subject: Minutes of the 5th Meeting of Expert Committee to review the existing methodology of scheme on Integrated Sample Survey (ISS)-reg.

The undersigned is directed to circulate herewith the minutes of the 5th meeting of Expert Committee on **"Integrated Sample Survey" (ISS)** methodology held during **24-25 April, 2025** at Puri, Odisha.

K Singh
21/05/2025

(Karanveer Singh)
Assistant Director

Distribution:

1. The Chairman of the Expert Committee
2. All the members of the Expert Committee.

Copy to:

1. Sr. PPS to Secretary, DAHD, New Delhi.
2. PPS to Advisor (Stats), DAHD, New Delhi.

DEPARTMENT OF ANIMAL HUSBANDRY & DAIRYING
(ANIMAL HUSBANDRY STATISTICS DIVISION)

MINUTES OF THE 5TH MEETING OF EXPERT COMMITTEE TO REVEIEW THE EXISTING METHODOLOGY OF INTEGRATED SAMPLE SURVEY (ISS) SCHEME HELD DURING 24-25 APRIL 2025 AT PURI, ODISHA

The fifth meeting of Expert Committee to review the existing methodology of Integrated Sample Survey (ISS) Scheme was held at Puri, Odisha during 24-25 April, 2025 under the Chairmanship of Dr. G.C. Manna, (Ex DG, M/o Statistics & PI). The list of the Members & other participants is placed at **Annexure -I.**

2. At the outset, Advisor, Department of Animal Husbandry & Dairying (DAHD) welcomed all the participants and informed that as the duration of the Committee is going to end on 30.04.2025, the 5th meeting is the final meeting of the committee to finalise the review process of the existing methodology under the ISS Scheme. It was proposed that the Committee may like to give its final set of recommendations in this meeting itself so that on the basis of all the recommendations of the committee in its five meetings, a draft report may be prepared by the Secretariat of the Committee.

3. The Chairman, thereafter, welcomed all the participants. He then highlighted the agenda for both the days in detail and emphasized on the outcomes and importance of the recommendations on 'Review of the Existing Methodology of ISS' which could strengthen a robust annual estimation of major livestock products. He also informed that the draft report that is prepared by DAHD Secretariat will be circulated to all the members of the Committee for their suggestions if any before the finalization of the report. Thereafter, the report may be discussed among the core members of the Committee after which the final report will be submitted to the DAHD.

4. The action taken report (ATR) on the decisions of the previous EC meetings was presented before the Committee by the AHS Division. In addition, major relevant discussions of all the previous meetings were also presented before the Committee. However, Relative Standard Error (RSE) and the variance of the estimates of production and number of animals in small states could not be estimated and shown to the Committee due to malfunctioning of server at IASRI-ICAR. It was assured to the Committee that once the server become functional those will be shared with the Committee. The Committee desired that the same could be supplied to the Committee as soon as possible so that the report of the Committee can be finalized at the earliest.

5. On the second day, a detailed discussion on the draft report which was prepared by the secretariat was held. During the discussion, it was also emphasized that the challenges faced by the IASRI-ICAR for estimation of MLP with existing methodology needs to be documented in a chapter just before the recommendations of the Committee. Representative from IASRI

while discussing the draft report, gave a separate presentation on the challenges faced by them during the data analysis in ISS.

6. **The deliberations and decisions of the meeting are:**

i. **Estimation of Milk Production:** In some cases/districts, due to sample selection through Simple Random Sampling Without Replacement (SRSWOR) as per the existing procedure, there was no representation of some of the animals. As a result, though the animals are available in the district, the estimate of milk for such category become nil. To illustrate further, in some big states, there are several villages having exotic cow but due to non-representation of such villages in the sample, the estimate for this category of cow became zero. To resolve this problem, the Committee suggested a deep stratification of villages / wards according to the availability of different types of animals (particularly the rare animals) like exotic cow, crossbred cow, sheep, and so on before the selection of villages. For finalizing the deep stratification of villages/wards as discussed above, the Chairman advised the Secretariat of the Committee to share the State-wise information on number of villages/wards having different types of animals x species as per the last Livestock Census.

ii) **Estimation of Meat Production:** The current practice during detailed surveys is to list the animals available for slaughter and obtain the meat production per animal from registered slaughterhouses. However, if no registered slaughterhouse is present in a district, then information is to be taken from at least two butcher shops from that district covering all the animals (Cattle, Buffalo, Goat, Sheep, and Pig) slaughtered in the district.

In the case of poultry meat production at the household or backyard level, there is no standard formula for generating estimates in the instruction manual. It has been observed that in several districts, the reported number of animals slaughtered exceeds the estimated figures in comparison to the previous season estimates. These instances are especially common during festive periods. For example, during Eid in Kerala, animals are frequently brought in from neighbouring states for slaughter, which contributes to this statistical deviation. The Committee desired that the major problems in relation to the meat production being encountered by the division may be discussed within the core group of the Committee which is empowered to suggest remedial measures, if any.

iii) **Estimation of production for items which were not compulsory earlier:** With regard to the items of information being collected but not tabulated, the Committee was of the view that some important items may be considered for tabulation. IASRI-ICAR may develop a methodology to produce the estimates of such items once data is available.

iv) **Hamlet Group Selection:** The Committee found the existing method to be sound enough to capture the data. However, the field officials need to be trained adequately so that they understand the concept of hamlet-group formation/ selection.

v) **Rural-Urban Distribution of Samples:** The Committee recommended some reduction in the proportion of samples for urban areas with a corresponding increase in the sample size for rural, keeping the total sample size more or less unchanged.

vi) **Pilot Survey:** The Committee desired that the modified sample design with deeper stratification being recommended by the Committee may preferably be tested through a Pilot Survey with a reasonable sample size in a few States/districts before its implementation at the national level to assess its efficiency in terms of improvement as well as consistency of the estimates. The States/districts for the pilot survey may be chosen carefully. Particularly, some States/districts having problems listed under 6(i) must be covered.

The meeting concluded with the vote of thanks to the Chair.

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ANNEXURE-I

LIST OF THE PARTICIPANTS OF THE 5TH MEETING OF EXPERT COMMITTEE TO REVEIEW THE EXISTING METHODOLOGY OF INTEGRATED SAMPLE SURVEY (ISS) SCHEME HELD ON 24-25th APRIL 2025

The Committee/ representatives

1. Dr. G.C. Manna. Ex. DG, MoSPI,
2. Shri Hiranya Borah, Ex. DDG, D/o of Drinking Water & Sanitation
3. Shri Jagat Hazarika, Adviser (Statistics), DAHD, New Delhi
4. Dr. Prachi Misra Sahoo, Principal Scientist (ISS), ICAR-IASRI
5. Shri V.P. Singh, Director, AHS, DAHD
6. Dr. Anil Kumar, Principal Scientist, ICAR-NIAP, New Delhi.
7. Dr. Khem Chand, Principal Scientist, ICAR-NIAP, New Delhi.
8. Dr. Sanjeev Sharma, Deputy Director, AHD, Govt. of Uttar Pradesh.
9. Dr. Neelam Bala, Deputy Director, AHD, Govt. of Uttar Pradesh.
10. Dr. Srinivasa Raju, Joint Director, AHD, Govt. of Andhra Pradesh
11. Shri K Mohan Chand, Statistician, Govt. of Andhra Pradesh
12. Shri Rinchin Dawa, Field Officer, AHD, Govt. of Arunachal Pradesh
13. Shri Tsering Dakpa, Statistical Inspector, AHD, Govt. of Arunachal Pradesh
14. Dr. Sarvesh Kumar, NDDB, Anand, Gujarat

Joined Virtually

1. Dr. Subhra Sarkar, DDG, NAD, MoSPI, KL Bhawan, Delhi
2. Dr. Tauqeer Ahmed, Head of Division (ISS), ICAR-IASRI, Delhi
3. Dr. Sushma Jadhav, Joint director, AHD, Govt. of Maharashtra

Other participants

1. Shri Karanveer Singh, Assistant Director, AHS, DAHD
2. Shri Sunil Kumar, SSO, AHS, DAHD
3. Dr. Latika, Consultant, AHS, DAHD

Government of India
Ministry of Fisheries, Animal Husbandry & Dairying
Department of Animal Husbandry & Dairying
(Animal Husbandry Statistics Division)

MINUTES OF THE MEETING OF THE CORE GROUP OF EXPERT COMMITTEE TO FINALIZE THE REPORT ON METHODOLOGY OF THE " INTEGRATED SAMPLE SURVEY" (ISS) HELD ON 28TH AUGUST, 2025 AT 11.00 AM AT ROOM NO. 106, INDIAN AGRICULTURAL STATISTICS RESEARCH INSTITUTE (IASRI), PUSA, NEW DELHI.

Meeting of the Core Group of Expert Committee to finalize the report on methodology of the "Integrated Sample Survey" (ISS) was held on 28th August, 2025 at 11.00 AM at Room No. 106, Indian Agricultural Statistics Research Institute (IASRI), Pusa, New Delhi under the Chairmanship of Dr. G.C. Manna, Ex DG, Ministry of Statistics & Pl. List of the Members & other participants is placed at **Annexure -I.**

1. At the outset, Adviser (Stats.) welcomed all the participants to the meeting. The purpose of holding the meeting was also briefly described in his welcome address. He emphasized that the report needs to be finalized before the next cycle begins so that necessary approval of the competent authority could be obtained by the time of next cycle starts.

2. The Chairman, thereafter, started the meeting by welcoming the participants and he expressed his concern over time over-run in finalizing the report of the Committee. It was informed by the Animal Husbandry Statistics Division (DAHD) that copies of draft revised report edited by the Chairman were circulated among the members of the committee for their observations. However, no comments were received from any member of the committee except ICAR-IASRI.

3. The deliberations and decisions of the meeting are as follows:

i. Stratifications of the villages and wards may be made on the basis of availability of the rare animals / exotic cattle breeds to improve the related estimates.

ii. The Committee recommended the following points:

Complete Enumeration:

- One special stratum may be formed at the State/UT level comprising F.S.Us having no animal with an allocation of 4 F.S.Us.
- **Two strata may be formed in each district for each season:**
  - Str.1: F.S.Us (other than those in the special stratum) having at least one Rare animal (e.g. - exotic cattle and/or sheep);
  - Str.2: All the remaining F.S.Us
- **Each stratum may be sub-stratified into two groups:**
  - Sub-Stratum 1 : F.S.Us having less than 10 livestock animals pertaining to Milk (Cattle, Buffalo, Goat) and Wool (Sheep);
  - Sub-Strata .2 : F.S.Us having at least 10 livestock animals pertaining to Milk (Cattle, Buffalo, Goat) and Wool (Sheep)

Detailed Survey:

- 01 Village and 01 ward from each sub-stratum for each season across each sub- sample may be selected at random for estimation of yield.

Rural/Urban Allocation

- District wise total sample size of maximum of 160 F.S.Us may remain unchanged. However, this total sample size may be allocated between rural and urban in proportion to number of F.S.Us.

Hamlet Group Selection

- Existing method may continue. However, the implementation issues regarding formation and selection of Hamlet Groups as per the prescribed methodology may be taken care of with extensive consultation with states. The cases are more in urban areas.

Method of Estimation of Different Parameters:

- For the minor modifications necessary in the estimation procedure to arrive at the State/UT level estimates of aggregates as well as rates and ratios on account of the proposed changes in the sample design and also for deriving the estimates pertaining to the additional data to be collected on a compulsory basis, the IASRI may be requested to develop the estimation procedure.

  The meeting concluded with the vote of thanks to the Chair.

Annexure – I

List of Participants

The Committee/ representatives:

1. Dr. G.C. Manna, Ex. DG, MoSPI,
2. Shri Jagat Hazarika, Adviser (Statistics), AHS, DAHD
3. Dr. Rajender Parsad, Director, ICAR-IASRI
4. Dr. Tauqeer Ahmed, Head of Division (ISS), ICAR-IASRI
5. Dr. Prachi Misra Sahoo, Principal Scientist (ISS), ICAR-IASRI
6. Shri VP Singh, Director, AHS, DAHD
7. Shri Baidhar Swain, Assistant Director, AHS, DAHD

No. T-12018/2/2021-AHS_DADF
Government of India
Ministry of Fisheries, Animal Husbandry & Dairying
Department of Animal Husbandry & Dairying
(Animal Husbandry Statistics Division)

Second Floor, Chanderlok Building
36 Janpath, New Delhi-110001
Date: 22/04/2024

OFFICE MEMORANDUM

Subject: **Constitution of the Expert Committee to review the existing methodology of "Integrated Sample Survey" (ISS) Scheme-reg.**

The Competent Authority has approved the constitution of Expert Committee to review the existing methodology of "Integrated Sample Survey (ISS)" of Major Livestock Product (Milk, Egg, Meat & Wool). The composition of the committee is as follows:

1.	Dr. G.C. Manna (Ex. DG, M/o Statistics & PI)	Chairman
2.	Shri Hiranya Borah (Ex, DDG, D/o Drinking Water & Sanitation)	Member
3.	Senior Adviser (Agriculture & Allied Sector) NITI Aayog, New Delhi	Member
4.	Adviser (Statistics) DAHD, New Delhi	Member
5.	Adviser (Agriculture Census) D/o Agriculture & Farmers Welfare New Delhi	Member
6.	DDG (NAD) M/o Statistics & PI, New Delhi	Member
7.	DDG (SDRD) M/o Statistics & PI, Kolkata	Member
8.	Director, ICAR-IASRI, New Delhi	Member
9.	Director, Indian Statistical Institute (ISI) Kolkata	Member
10.	Chairman, National Dairy Development Board (NDDB) Anand, Gujarat	Member
11.	Head of the Sample Survey, ICAR-IASRI, New Delhi	Member

22/04/2024

12.	Director, Animal Husbandry Department Govt. of Arunachal Pradesh, Andhra Pradesh, West Bengal, Maharashtra, Uttar Pradesh	Member
13.	Joint Commissioner, Dairy Division DAHD, New Delhi	Member
14.	Director, AHS, DAHD, New Delhi	Member Secretary

2. The Committee may co-opt any other member to assist in its deliberations.

3. The Terms of Reference (ToR) of the Expert Committee are as follows –

The Committee will examine, review and recommend –

i. the existing sample size and frame of the ISS,
ii. the existing sampling method & selection procedure of ISS,
iii. the existing methodology for estimation of Major Livestock Products (MLP),
iv. the existing schedules for data collection on production of Milk, Egg, Meat and Wool and its coverage, and
v. any other issue that related to Integrated Sample Survey.

4. The EC will submit its report to DAHD within 6 Months of time.

5. The expenditure on TA/DA of the member in connection with the meeting of the Committee will be borne by the parent Deptt / Ministry/ Organization. The expenditure in respect of non-official member, if any, will be borne by Dept. of Animal Husbandry and Dairying (DAHD) as per rules and regulations prescribed in Dept. of Expenditure (DoE) O.M. No.19047/1/2016-E. IV dated 14th September, 2017.

This issued with the approval of the Secretary (AHD).

22/04/2024
(Chet Ram Meena)
Deputy Director

Distribution:

The Chairman/ All the members of the Expert Committee.

Copy to: -

1. Sr. PPS to Secretary, DAHD, Krishi Bhavan, New Delhi
2. PPS to AHC, DAHD, 2nd Floor, Chanderlok Building, Janpath, New Delhi
3. PS to Adviser (Statistics), DAHD, 2nd Floor, Chanderlok Building, Janpath, New Delhi

22/04/2024

F.No. 19047/1/2016-E.IV
Government of India
Ministry of Finance
Department of Expenditure
******

North Block, New Delhi
Dated: 14.09.2017

OFFICE MEMORANDUM

Subject: TA/DA entitlements of Non-officials of Committees/Boards/Panels etc.

The undersigned is directed to state that the issues related to payment of TA/DA to Non-officials of Committees/ Boards/ Panels etc. have been examined in D/o Expenditure. It has been decided that TA/DA entitlement of Non-officials may be regulated by the Administrative Ministries/ Departments in the following manner:-

(I) **Retired Govt. officials nominated as Non-official in the Committees/Boards/Panels etc. :**

TA/DA entitlement of these Non-officials will be same as per their entitlement at the time of retirement as per revised rates mentioned in this Department's O.M. No.19030/01/2017-E.IV dated 13.07.2017.

(II) **Persons from various fields nominated as Non-official in Committees/Boards/ Panels etc. :**

TA/DA entitlement of these Non-official will be same as admissible to officers in Pay level-11 (Pre-revised Grade Pay of Rs.6600/-) in the Pay Matrix. TA/DA Entitlements will be as under:-

i) Travel entitlement within the country - Economy class by Air or AC-II by train.
ii) Reimbursement for hotel accommodation/guest house of up to Rs.2250/- per day.
iii) Reimbursement of non-AC taxi charges of up to Rs.338/- per day for travel within the city.
iv) Reimbursement of food bills not exceeding Rs.900/- per day.

(III) **Eminent personalities nominated as Non-official in the Committees/Boards/Panels:**

TA/DA entitlement of these Non-officials will be same as admissible to officers in Pay level 14 (pre-revised Grade pay Rs.10,000/-) in the Pay Matrix. TA/DA Entitlements will be as under.

i) Regarding travel entitlement of these Non-officials, Secretary in the Administrative Ministry, in consultation with the FA, may allow eminent personalities who are Non-officials in the Committees/Boards/Panels etc., to travel in Executive class in the Domestic airlines within the country subject to the following conditions :-

a) Where a Non-official is or was entitled to travel by air by Executive class under the rules of the organization to which he belongs or might have belonged before retirement.
b) Where the Administrative Ministry is satisfied that the travel by Executive class by air is the customary mode of travel by the Non-official concerned in respect of journeys unconnected with the performances of Govt. duty.

ii) Reimbursement for hotel accommodation/guest house of up to Rs.7500/- per day.
iii) Reimbursement of AC taxi charges as per actual for travel within the city.
iv) Reimbursement of food bills not exceeding Rs.1200/- per day.

Contd. 2/-

2 In respect of Non-officials who are local, Mileage Allowance at the following rates will be admissible:-

i) **For retired Government officers-** TA/DA as per their entitlement at the time of retirement as per revised rates mentioned in this Department's O.M. No.19030/01/2017-E.IV dated 13.07.2017.

ii) **Other Non-officials nominated from various fields** - Reimbursement of non-AC taxi charges of up to Rs.338/- per day for travel within the city.

iii) **For eminent personalities nominated as Non-officials** - Reimbursement of AC taxi charges as per actual for travel within the city.

3. The TA/DA entitlements mentioned in Para I above will be subject to the following conditions:-

i) These TA/DA entitlements will be applicable in case of Non-officials coming from outside. Local Non-officials will not be entitled for TA/DA.

ii) Local Non-officials will be entitled for Mileage Allowance only.

iii) Cases seeking deviation from the above entitlements may be referred to M/o Finance giving full justification for seeking deviation.

4. These instructions will be effective from the date of issue of this O.M.

5. This is issued with the approval of Finance Minister.

(Nirmala Dev)
Deputy Secretary (EG)
Telefax. 23093276

1. **Secretaries of all Ministries/ Departments (as per standard list)**
2. **Financial Advisors of all Ministries/ Departments as per standard list**

Review of Integrated Sample Survey (ISS) Methodology by Expert Committee

The Integrated Sample Survey (ISS) scheme was launched in 1985–86 under the overall supervision of the Department of Animal Husbandry and Dairying (DAHD). The survey schedules and methodology were originally developed with the help of ICAR-IASRI. The ISS methodology was last reviewed in 2009 by a committee chaired by the Animal Husbandry Commissioner (DAHD).

Considering socio-economic changes over the years and recommendations made in the Technical Committee meeting held at Bangalore on 29–30 September 2022, DAHD constituted an Expert Committee under the chairmanship of Dr. G.C. Manna (Ex-DG, MoSPI) to examine, review, and recommend improvements in the sampling framework, survey schedules, and estimation procedures for major livestock products under ISS.

According, the Committee after detail deliberation now submits it's recommendations herewith.

Signatures of all members of the Expert Committee

Sl. No	Name of the member	Designation	Signature
1.	Dr. G.C. Manna. Ex. DG, MOSPI	Chairman	
2.	Shri Hiranya Borah, Ex. DDG, D/o of Drinking Water & Sanitation	Member	
3.	Senior Advisor, NITI Ayog (Agriculture & Allied sector)	Member	
4.	Adviser (Statistics), DAHD, New Delhi	Member	
5.	Advisor (Agriculture Census), D/o Agri. & Farmers welfare	Member	
6.	DDG, NAD, MOSPI, Delhi	Member	
7.	DDG, SDRD, MoSPI, Kolkata	Member	

8.	Director, ICAR-IASRI, New Delhi	Member	
9.	Director, ISI, Kolkata	Member	for
10.	Chairman, NDDB, Gujarat	Member	
11.	Head, Division of Sample Surveys, ICAR-IASRI, New Delhi	Member	
12.	Director, AHD, Arunachal Pradesh	Member	
13.	Director, AHD, Andhra Pradesh	Member	
14.	Director, AHD, West Bengal	Member	
15.	Director, AHD, Maharashtra	Member	
16.	Director, AHD, Uttar Pradesh	Member	
17.	Joint Commissioner (DC), Dairy Division, DAHD, New Delhi	Member	
18.	Director, AHS, DAHD, New Delhi	Member Secretary	

19. Director, ICAR-NDRI, Karnal — Member

Animal Husbandry Statistics (AHS) Division,
Department of Animal Husbandry & Dairying (DAHD).
Ministry of Fisheries, Animal Husbandry & Dairying,
Government of India