### NSS Household Surveys

12 August 2024

### Historical Perspective

- NSS has been undertaking household surveys since its inception in the year 1950.
- The first round of NSS conducted during Oct'1950 to Mar'1951was a household survey.
- It covered:
  - General Household Particulars
  - Agriculture and Livestock
  - Household Industry, Craft and Trade
  - Services and Financial Operations
  - Household Consumer Expenditure

### Historical Perspective

- Conducted in Rural Areas of the Country Only
- A Land Utilisation Survey was also undertaken in the first round of NSS.
- Collected information on rural prices and wages for certain type of manual work in a village schedule.
- States has been participating in surveys of NSS from as early as 1954 when the 8<sup>th</sup> round was undertaken.
- A survey on land holding was taken up in the 8<sup>th</sup> round of NSS (Jul' 1954 to Mar'1955) as part of World Agricultural Census.

### Historical Perspective

- As the NSS samples were small, state Governments were invited to participate with matching samples so as to enable generation of estimates at state level.
- After the 8<sup>th</sup> round many states continued to participate in NSS.

### Current NSS Household Surveys

- Most of the surveys undertaken by NSS are household surveys
- Conducted at periodic intervals
- With participation of states
- Prominent surveys
  - Household Consumption Expenditure Survey
  - Periodic Labour Force Survey
  - Surveys on Household Social Consumption; Health & Education
  - All India Debt and Investment Survey
  - Situation Assessment Survey of Indian Farmers

### Current NSS Household Surveys

- Ad-hoc Surveys
  - Survey on Domestic Tourism
  - Survey on Disability
  - Survey on Ayush
  - Multiple Indicator Survey
  - Survey on Housing Condition, Drinking Water and Sanitation
  - Survey on Slum
  - Comprehensive Annual Modular Survey

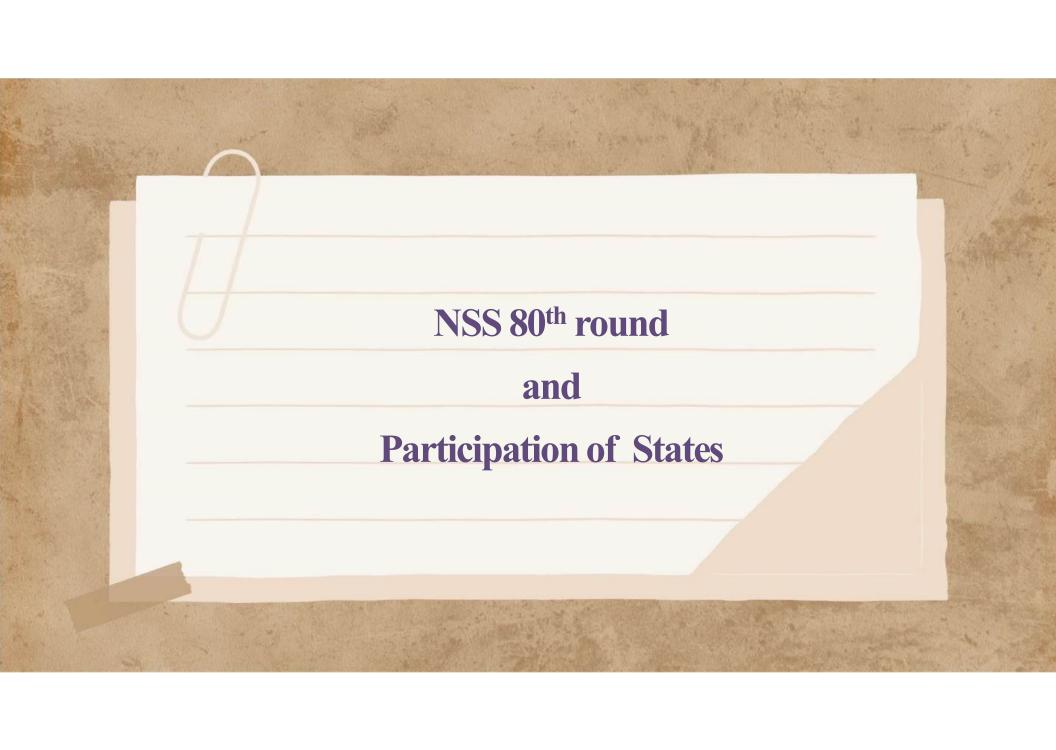
### Some Changes Introduced in NSS Surveys

- Surveys on Employment & Unemployment and Household Consumer Expenditure used to be conducted together at 5 year intervals prior to 2017-18 (NSS 75<sup>th</sup> round)
- PLFS came into being in 2017-18 for generation of quarterly labour force indicators.
- HCES was undertaken as a separate survey in 2017-18
- Some changes in the sampling design and stratification criteria was introduced in PLFS
  - Rotational Panel Sampling Design
  - NSS region as basis strata instead of districts
- Consequently, it became inconvenient for states to participate in PLFS.

## Some Changes Introduced in NSS Surveys

- A number of changes have also been introduced in Household Consumption Expenditure Survey (HCES): 2022-23
  - Split of the complete schedule into three parts
  - Collection of information in three separate monthly visits
  - State as basic strata instead of the districts





### Household surveys ...forth coming

- NSS 80th round
- Will commence in the year 2025
- NSSO will extend technical guidance and support to the participating States
- Assistance will be in same line as followed in earlier rounds

### Proposed Subject of coverage for NSS 80th round

DOMESTIC TOURISM EXPENDITURE SURVEY (DTES)

(PERIOD: 1 YEAR COMMENCEMENT: JULY, 2025)

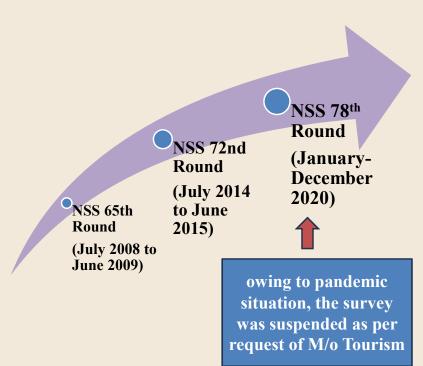
SURVEY ON HEALTH

(PERIOD: 1 YEAR COMMENCEMENT: JANUARY, 2025)

NATIONAL HOUSEHOLD TRAVEL SURVEY (NHTS)

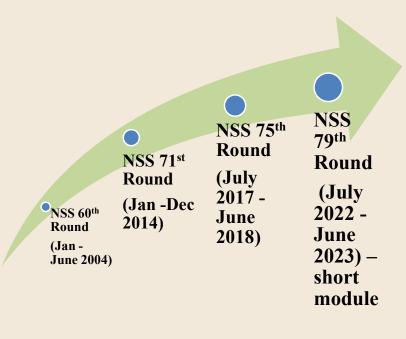
(PERIOD: 1 YEAR COMMENCEMENT: JULY, 2025)

### **DTES**



- ✓ Ministry of Tourism is the main user
- ✓ Ministry of Tourism is planning to prepare fourth Tourism Satellite Account (TSA) of India
- ✓ Domestic Tourism Expenditure Survey is one of the major and inevitable data source
- ✓ Data may be used to generate estimates of different parameters of Indian tourism sector and UNWTO

### **HEALTH SURVEY**



- ✓ MoHFW is the main user
- ✓ Data source for different health related indicators
- ✓A short module in CAMS for collection of information on out-of-pocket expenditure on health NSS 79<sup>th</sup> round
- ✓ A dedicated survey on Health is planned for 80<sup>th</sup> round
- ✓Information on health expenditure, information on morbidity etc.

### **NHTS**

- M/o Railways has requested to conduct National household Travel Survey (NHTS)
- Objective...
  - ✓ Assess the spatial demand matrix for different transportation modes (rail, road, air, etc.) and influencing factors affecting the mode, destination choice
  - ✓ Assess the price elasticity of travel demand (mode-wise)
  - ✓ Within the overall Origin-Destination rail demand matrix, assess the class-wise demand for different coaches so as to formulate a coach production plan

### State assistance

- Survey instruments...
  - ✓ sampling design
  - ✓ survey questionnaire
  - ✓ sampling frame
  - ✓ state sample list
  - ✓ estimation procedure
  - ✓ tabulation plan etc.
- •Technical guidance training, conceptual clarifications etc.
- Latest round NSS 79th (July, 2022 June, 2023)

### State assistance...

- Earlier in round based surveys, the sampling design was developed keeping the districts as basic stratum enabling States to generate district level estimates
- In the surveys launched in recent years, NSS region/state is considered as the basic stratum.
- The present sampling design of surveys viz., PLFS, HCES etc. is not accommodative to enable district-level estimates even if the states participate in these surveys.
- To generate the district level estimates, design of these surveys will be modified and district will be the basic stratum



# Large Scale Surveys and use of CAPI in NSS

National Sample Survey Office

Data Processing Division

### Large Scale Surveys



### Complex

- ❖ Sample Design
- Questionnaire
- ❖ Data Collection
- $\ \ \, \ \ \,$  Processing and Dissemination

### **Demanding**

- Monitoring
- ❖ Administration
- Structure for flow of survey data





Household Consumption Expenditure Survey (HCES)



Periodic Labour Force Survey (PLFS)



Annual Survey of Unincorporated Sector Enterprises (ASUSE)



Time Use Survey (TUS)



Comprehensive Annual Modular Survey (CAMS)



Survey on AYUSH

### e-SIGMA: An overview



e-Survey Information Gathering and Monitoring Application

(e-SIGMA)



A digital platform: cloud based modular system



Comprises of CAPI as the front-end Module along with other peripheral Modules related to survey management and administration

### e-SIGMA: CAPI & other Peripheral Modules





**Survey Setup** 

- Required during set up of each new survey
- Uploading the sample list of the survey
- Substitution of FSUs in the sample list

e-SIGMA: Understanding
Peripheral Modules related to
survey management and
administration



**User Management** 

- Adding new users
- · Updating details of active users



**DS FSU Tagging** 

- Survey-wise allocation of each DS
- Zone-wise allocation of FSUs to each DS User of DPCs



**Self-Learning** 

 Instruction Manual for field staff, operational guidelines on CAPI and videos for understanding concepts/ definitions of the survey



#### Query

- Common platform for sharing feedbacks in terms of Q
   & A
- Replies are provided to the field queries which is accessible to field personnel

e-SIGMA: Understanding
Peripheral Modules related to
survey management and
administration



#### Dashboard

- Information on FSU-wise progress of the on-going surveys
- Detailed Report shows the movement of each FSU right from assignment to the enumerator to acceptance of the FSU by DS User
- Summary Report shows ZO and RO-wise snapshot of the current status and progress report of the survey



#### Data Download

 Unit-level data of listing & detailed schedule of each survey can be downloaded here from the cloud server

### **Data Collection using CAPI**

- Data is collected through
   Computer Assisted Personal
   Interview (CAPI) using tablets
- Integrated with e-SIGMA platform of MoSPI



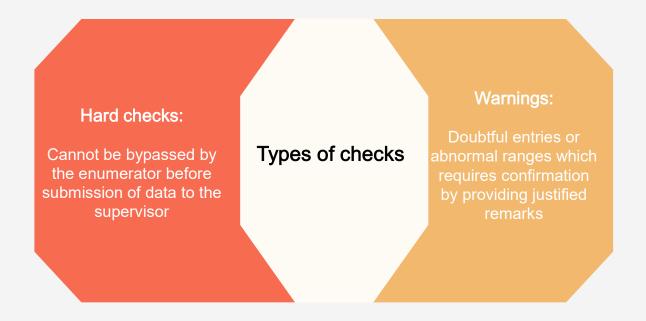
### e-SIGMA: CAPI Module





- CAPI is the front-end module of e-SIGMA which facilitates data canvassing in the field by enumerators using Tablets
- Developed afresh for each new survey and integrated with other peripheral modules with necessary customizations
- GPS enabled and ready for both online and offline canvassing
- Internet connection is required during submission of FSU to the cloud server
- CAPI has in-built validation mechanism to facilitate faster transmission, processing and dissemination of quality data

#### **CAPI Module: In-built validation**

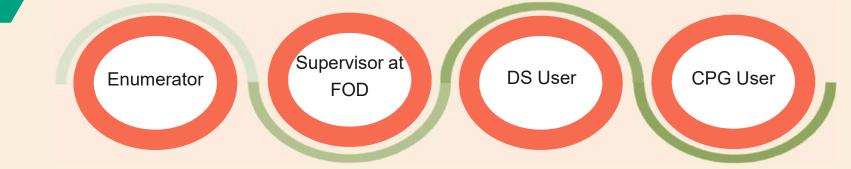


- Auto-computation and upload of sketch maps of hamlet-group/subblock formation
- Listing of households/establishments and formation of second stage stratum
- Random selection of the units using the appropriate sampling design
- Integration of listing schedule and detailed schedule based on the information gathered at listing stage
- Ensuring inter-block and intra-block consistencies

### Work-flow of survey: Data collection to Data submission

- Scrutinises the data, warnings and associated remarks received from the enumerator, seeks clarifications from enumerator, if required
- Submits the data to the DS Users of DPCs

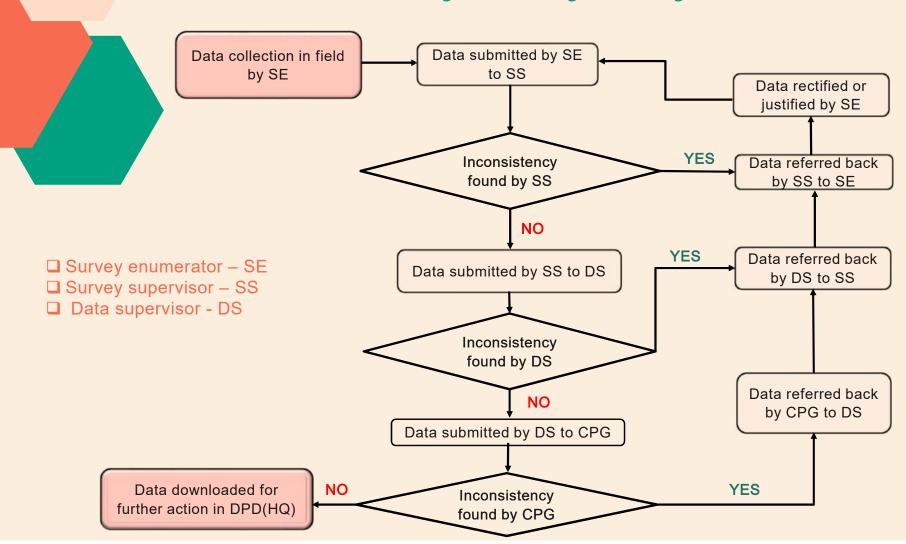
➤ Bulk data transformed into databases and analysed to identify inconsistencies/doubtful cases which are difficult to find at FSU level



- Submits FSU to supervisory level after clearing all hard checks
- ➤ For each warning, enumerator may either provide justifying remarks or make necessary correction in the data
- ➤ Data entry and edit provision has only been provided to enumerators

- Scrutinises the data, warnings and associated remarks received from the Supervisor
- Can create additional comments on data issues and seeks clarifications from FOD, if required
- > Submits the data to the DPD HQ for further processing, once they are fully satisfied with the quality of data

### Work-flow of survey: Survey life-cycle

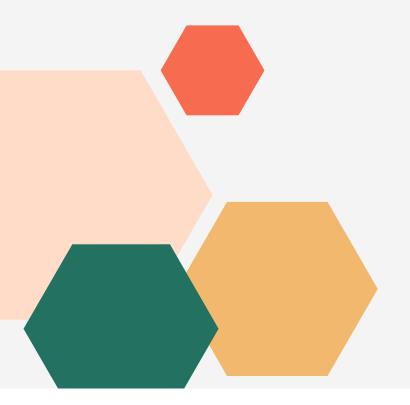


### User Acceptance Test (UAT)

- ❖ After through in-house testing at DPD, the test version of CAPI is shared with FOD for UAT.
- Necessary modifications are made before Go-Live of the survey on the basis of the feedback received

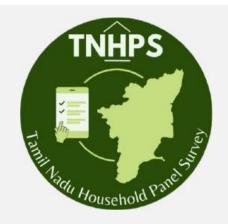






### THANK YOU







### Tamil Nadu Household Panel Survey(TNHPS)

28<sup>th</sup> Conference of Central and State Statistical Organisations

	37	*:	1.7											
•	•	•					12 <sup>th</sup> August 2024			•	•	•	•	•
•	•	•					12 /1agast 2021				•		•	•
	•													
									•	•	•	•	•	
	•	•	•	•	•		In partnership with the Department of	60	•	•	•	•	•	•
•	•	•	•	•	•	٠	Economics and Statistics, GoTN	*	•	•	•	•	•	•
	•	•	•	•	•		, and the second	*:	•	•	•	•	•	

### ABOUT THE TNHPS

- The TNHPS is <u>India's first and only panel survey</u> initiated and funded by any <u>state government.</u>
- The TNHPS is a longitudinal panel survey that began with a <u>Pre Baseline Survey</u> or PBS (2018-19), followed by a <u>Baseline Survey</u> or BLS (2022-23) and subsequent periodic surveys (Wave 2, Wave 3, etc.).
- The TNHPS also marks the official transition of the GoTN from traditional Pen and Paper Interview (PAPI) to Computer Assisted Personal Interview (CAPI).

### EVIDENCE BASED POLICY MAKING

- As part of GoTN's commitment to evidence-based policy making, Tamil Nadu initiated a series of short and long-term studies and surveys since 2015-16.
- TNHPS was initiated in collaboration with the **MIDS, SRC and the DES**, GoTN to study the shifts in income and occupational structures in TN.
- The <u>Pre Baseline Survey (PBS)</u> was undertaken across **2,12,282** households in 32 districts in 2018-19.
- During the pandemic, a spin-off panel survey was initiated called the <u>Tamil Nadu</u>
   <u>Covid Pulse Survey (TNCPS)</u> that studied the impacts of COVID-19 across 2020-21.
- The **Baseline Survey (BLS)** was undertaken in 2022-23 on a sample of 20,380 households selected from the PBS sample frame.

### RESEARCH OBJECTIVES



### **Objective I**

To gather data on a range of socioeconomic characteristics in the districts of TN and to analyse patterns of change in income, occupational structures and so on.



### **Objective 2**

To analyse the role of government policies in enhancing the household welfare and to study the impact.

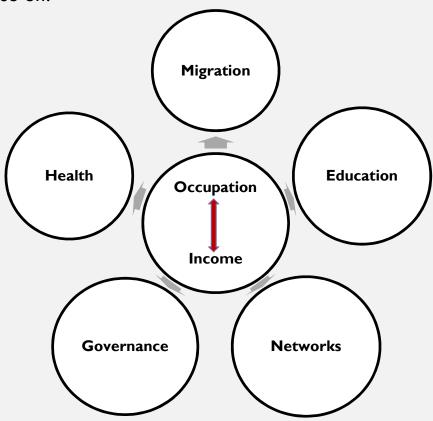


### **Objective 3**

To build capacity at the state level for digital data deployment, collection and management.

#### CONCEPTUAL FRAMEWORK

<u>Broad research question</u> - How do households maximise well-being during shifts in income, occupational structures, living conditions and so on?

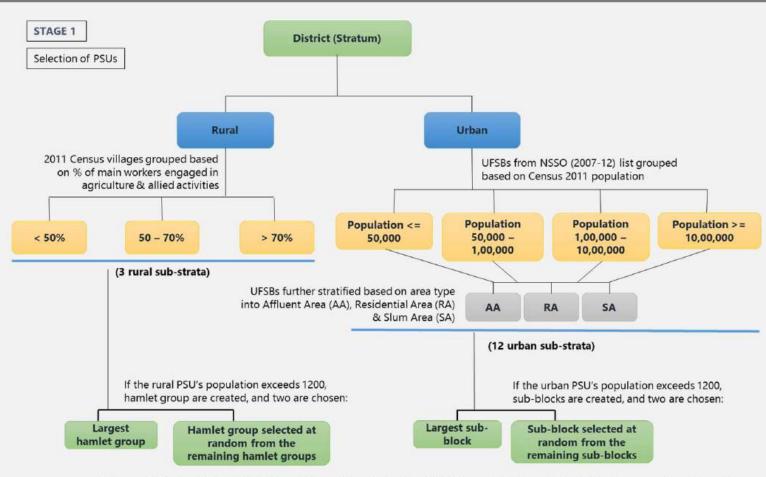


#### TNHPS TIMELINE (2016-PRESENT)

S. NO	Survey	Sample	Time-period	Stakeholders	
		2,12,282 households from 32 districts			
	Pre Baseline Survey (PBS) CAPI*	Relisting: 38,857 households from 11		MIDS, SRC and DES (GoTN)	
I		districts	March 2018- May 2019		
		(Stratified selection from Census '11			
		<u>and UFS'17)</u>			
	Tamil Nadu Covid Pulse Survey –	10,014 households from 32 districts			
2	ROUND I (TNCPS) CATI*	(Stratified selection from TNHPS PBS March 2020- May 20		MIDS and DES (GoTN)	
		sample with telephone numbers)			
3	TNCPS – ROUND 2	8,940 households from 32 districts	June 2020 – September		
J	CATI	6,740 Households Hofff 32 districts	2020		
4	TNCPS- ROUND 3	8,664 households from 32 districts	October 2020 –	"	
Т	CATI	0,004 Households II offi 52 districts	January 2021		
		9,260 households from 32 districts			
5	TNCPS- ROUND 4	(5,728 HHs participated in all 4	February 2021 – June	"	
	CATI	rounds)	2021		
6	Baseline Survey (BLS) or Wave I	20,378 households from 38 districts	October 2022 - March	"	
	CAPI		2023		

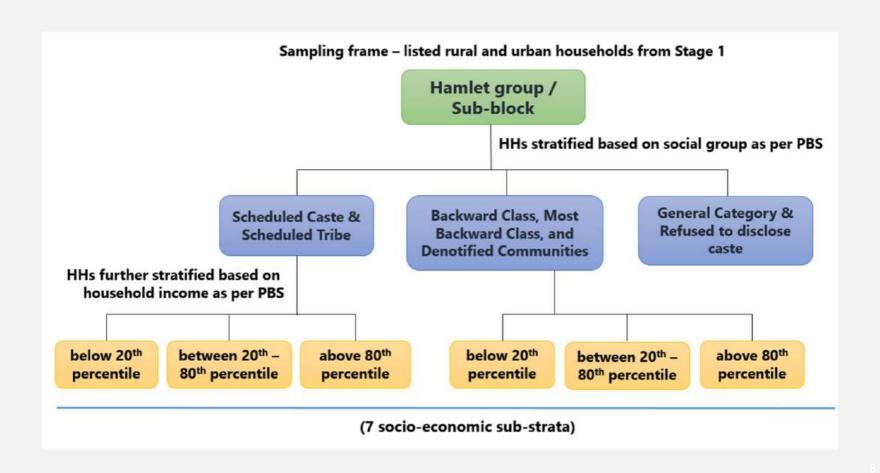
<sup>\*</sup>CAPI – Computer Assisted Personal Interview, CATI – Computer Assisted Telephone Interview

#### SAMPLING - SELECTION OF PSU (MULTI-STAGE STRATIFIED RANDOM SAMPLING)



All households in the PSU are listed if the PSU population is less than 1200. Else, only the households in the above-mentioned hamlet groups and sub-blocks are listed.

#### SAMPLING - SELECTION OF USU (MULTI-STAGE STRATIFIED RANDOM SAMPLING



#### RESEARCH THEMES

#### Household Modules (Part A)

 In addition to collecting the roster details of all residential and non-residential members, the following modules were administered to the key informant representing the entire household



#### **Individual Modules (Part B)**

 The following modules were administered to the eligible persons in the household



#### Village Level (Part C)

- This module captured variables at the village level
- This module was administered by the **DES supervisor** to knowledgeable persons in the village such as **VAO** etc.



#### DATA MONITORING AND QUALITY CONTROL

**Back Check** 

As data were uploaded, a small sample was selected at random by the MIDS research team on a weekly basis and back-checked by either the DES Supervisor or the MIDS Field staff.

**Audio Check** 

These checks were inbuilt into the questionnaire and specific portions of the interview were audiorecorded after eliciting consent.

High Frequency
Checks

These checks were undertaken by MIDS team on STATA software on a bi-weekly basis in coordination with supervisors to identify inconsistencies between variables in the dataset

**Telephone Checks** 

In the case of logical errors in the dataset, the respondents are being contacted via telephone and rectifications are made by the team.

In addition, a reporting mechanism in the form of tracking sheets was used for a periodical review by the field supervisors.

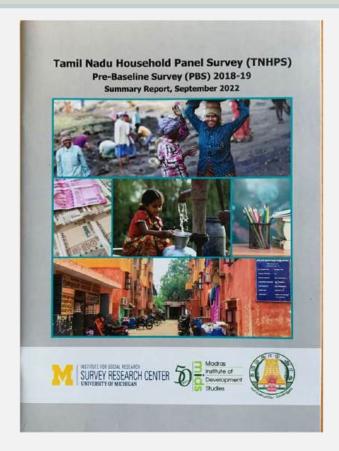






# KNOWLEDGE CREATION UNDER TNHPS

#### **RESEARCH OUTPUTS – REPORTS**



TNHPS PBS SUMMARY REPORT (2022)



The Hon. FM of Tamil Nadu (former) released the TNHPS PBS Summary report at the Secretariat in 2022

#### **RESEARCH OUTPUTS – REPORTS**

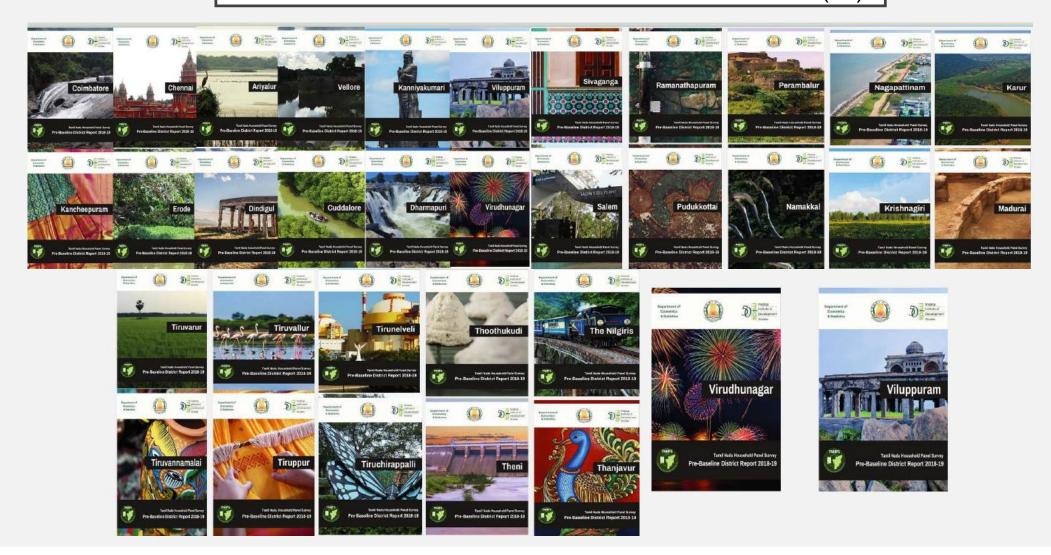




TNHPS PBS REPORT (2021)

TNHPS PBS POLICY BRIEFS (2022)

#### RESEARCH OUTPUTS – PBS DISTRICT REPORTS (32)



#### **RESEARCH OUTPUTS -TNCPS REPORTS**



TNCPS REPORTS (2020-21)

#### **RESEARCH OUTPUTS - PUBLICATIONS**

#### Journal articles and MIDS working papers

- I. Jafar, K., Ananthpur, K. & Venkatachalam, L. (2023). Digital divide and access to online education: new evidence from Tamil Nadu, India. Journal of Social and Economic Development. 25, 313–333. https://doi.org/10.1007/s40847-023-00236-1
- 2. Sridharan, G & Kripa Ananth Pur (2023). 'Cash and Wages: A Need for a Dual Strategy for Empowering Women in Tamil Nadu', Economic and Political Weekly, Vol 58, No 39: 13 16. <a href="https://www.epw.in/journal/2023/39/commentary/cash-and-wages.html">https://www.epw.in/journal/2023/39/commentary/cash-and-wages.html</a>
- 3. Ananthpur, K., Jafar, K., Sridharan, G., & Venkatachalam, L. (2022). Impact of the COVID-19 waves on Tamil Nadu's economy and society (Working Paper No. 241). Madras Institute of Development Studies. <a href="https://www.mids.ac.in/assets/doc/WP\_241.pdf">https://www.mids.ac.in/assets/doc/WP\_241.pdf</a>
- 4. Ananthpur, K., de Jong, J., Sridharan, G., & Shrivastava, B. (2023). How Good is Your Data? Challenges of Ensuring Data Quality in a Large-Scale Survey: Lessons from the Tamil Nadu Household Panel Survey (TNHPS) (MIDS Working Paper No. 243). Madras Institute of Development Studies. <a href="https://www.mids.ac.in/assets/doc/WP-243.pdf">https://www.mids.ac.in/assets/doc/WP-243.pdf</a>

#### **RESEARCH OUTPUTS - PUBLICATIONS**

#### Newspaper articles:

- I. Ananthpur, K., Venkatachalam, L., & Jafar, K. (2021, July 25). Tamil Nadu Covid Pulse Survey finds economic recovery follows lifting of lockdowns. The New Indian Express. <a href="https://www.newindianexpress.com/states/tamil-nadu/2021/Jul/25/tamil-nadu-covid-pulse-survey-finds-economic-recovery-follows-lifting-of-lockdowns-2335002.html">https://www.newindianexpress.com/states/tamil-nadu/2021/Jul/25/tamil-nadu-covid-pulse-survey-finds-economic-recovery-follows-lifting-of-lockdowns-2335002.html</a>
- 2. Sridharan, G and Kripa Ananth Pur (2023, April 8). Challenges of implementing 'Magalir Urimai Thogai' (Women's Rights Grant Scheme)'. The New Indian Express. <a href="https://www.newindianexpress.com/states/tamil-nadu/2023/apr/08/challenges-of-implementing-magalir-urimai-thogai-2563824.html">https://www.newindianexpress.com/states/tamil-nadu/2023/apr/08/challenges-of-implementing-magalir-urimai-thogai-2563824.html</a>

#### Work in progress:

- I. COVID-19 and its Mental Health Outcomes in Tamil Nadu Evidence from a Telephonic Panel Survey submitted
- 2. COVID-19's varied impact on jobs and income in Tamil Nadu: A district-level panel data analysis (first draft complete).





### THANK YOU

More info @www.tnhps.in



#### 28th CoCSSO Meeting on 12-13 August, 2024

Date: 12-08-2024

Time: 14:55 to 15:05



## **Subject: Participation of states in National Sample Survey**

**State: Uttar Pradesh** 

## Uttar Pradesh's Journey/milestones of National Sample Survey

9th Round 1955

Uttar Pradesh started participating in the NSS surveys with matching sample size

56th Round (July 2000-June 2001)

Decentralization of Data Entry by creating Data Processing Centers at Districts(which was previously being done at DES, HQ).

In house data entry and validation system was established.

61th Round (July 2004-June 2005)

To revise the base year, UP surveyed **twice** the number of samples than the Centre.

66th Round (July 2009-June 2010)

State started pooling of state and central sample data in the guidance of NSO, Govt. of India.

70th Round (Jan-Dec 2023)

To facilitate the pooling process, the Centre's data entry system was adopted by the State.

#### **Current Progress of NSS in Uttar Pradesh**

Round & Year	Schedule no. & Description	Predata Entry Scrutiny	Data entry	Validation	Remarks		
(1)	(2)	(3)	(4)	(5)	(6)		
78	0.0				Errors are identified in state sample		
Jan, 20-	List of Households	Completed	Completed	Completed	data. Which are being rectified at districts.		
Dec, 20	21.1				aistricts.		
	* Domestic Tourism Expenditure	-	-	-			
	5.1						
	Multiple Indicator Survey	Completed	Completed	Completed			
79	CAMS				All India Tabulation workshop is not		
July, 22- June, 23	Comprehensive Annual Modular Survey	Completed	Completed	Completed	held yet		
	Survey on AYUSH	Completed	Completed	Completed			

<sup>\*</sup> The first sub-round was surveyed by UP. Further survey was cancelled due to the Corona pandemic.

Reports upto NSS 77th rounds have been released

#### Time lag in Tabulation, Poolability Testing and Report Publication

- > Due to late receipt of tabulation software and associated training, states are experiencing significant delays in publishing state sample reports, despite timely completion of data entry and validation.
- > Just like the late availability of tabulation software for tabulation of state sample data, Poolability testing software along with unit level data of the central sample and related training is also available late to States.
- ➤ To streamline the utility and timeliness of report writing process, we request the NSO, Government of India to prioritize the timely provision of tabulation software and comprehensive training to the State.

NSS Rounds (survey period)	Survey Subjects	Survey Completed by UP	Receipt of Data Entry S/W form Gol	Data Entry and Validation Completed by UP	Tabulation Workshop held	Time lag duration (Col 5 to col 6)	Poolability Testing Workshop held by NSO, Gol	Time lag duration (Col 5 to col 8)
1	2	3	4	5	6	7	8	9
NSS 75th (July 17-June 18)	Disability, Drinking water, Sanitation, Hygiene and Housing Condition	June-18	July-18	Jan-19	Feb-20	1 Year	Mar-21	2 Years
NSS 76th (July 18-Dec 18)	Disability, Drinking water, Sanitation, Hygiene and Housing Condition	Dec-18	May-18	Feb-19	Feb-20	1 Year	Jul-23	4 Years
NSS 77th (Jan 19-Dec 19)	Debt and Investment, Livestock and Landholding	Dec-19	Apr-19	Jan-20	March-22	2 Year	-	-
NSS 78th (Jan 20-Dec 20)*	Multiple Indicator Survey	Mar-21	Feb-20	Jun-21	Apr-24	3 years	-	-
NSS 79th (July 22-June 23)	AYUSH and Comprehensive Annual Modular Survey (CAMS)	Jun-23	Sep-22	July-23	Still awaited	-	-	-

## Support to States for simultaneous partnership in Surveys and strengthening the bottom-up-approach of DDP estimation

- In line with the Prime Minister's resolve to VIKSIT BHARAT by the year 2047, UP Government's target of achieving one trillion dollar economy requires accurate estimation by bottom-up-approach from the district/sub-district levels.
- > States need to be relinked with PLFS/ASUSE/HCES and other Surveys being conducted by NSO, GoI, as had been the regular practice earlier.
- Adaptation in design for those States who may desire to have sub-state level estimates-district or even further down, may be supported by MoSPI, in designing of the survey, sample list, estimation procedure and tabulation etc.
- Increase in sample size for States as may be required for sub-state/district level estimates.
- ➤ To ensure that the RSEs of the estimates is within the acceptance range, the Government of India is requested to allocate samples to the state in such a way that the state can accurately derive lower level estimates as per its requirement. So that the state's economy can be assessed through a bottom-up approach.
- This will also provide for acceptability in case of assimilation of the generated data in GSDP estimation and comparability of the data sets at various levels.

### Digitization in data collection-Support for CAPI Implementation in Uttar Pradesh

- Due to the changing nature of surveys/real time and **timely demand for data**, like the Government of India, Uttar Pradesh is also interested in conducting surveys digitally/CAPI mode instead of conducting them on paper schedules.
- In this regard, the necessary tablets have also been purchased by the Economics and Statistics Division, Uttar Pradesh.
- The Government of India is requested to kindly **provide the necessary technical/software support** for conducting the upcoming surveys of the National Sample Survey in CAPI mode.
- ➤ It is requested to standardize the procedure of **CAPI procurement** with the state to conduct these surveys also in CAPI mode.
- Modal RFP and SOP for CAPI procurement may be shared with the states.

### **Thanks**