



Indochina Research

TECHNICAL REPORT

Short version

WORLD BANK

2022 Vietnam Time Use Survey

- February 2023 -

Indochina Research (Vietnam) Ltd.

TECHNICAL REPORT

(2022 Vietnam Time Use Survey)

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A – OVERVIEW

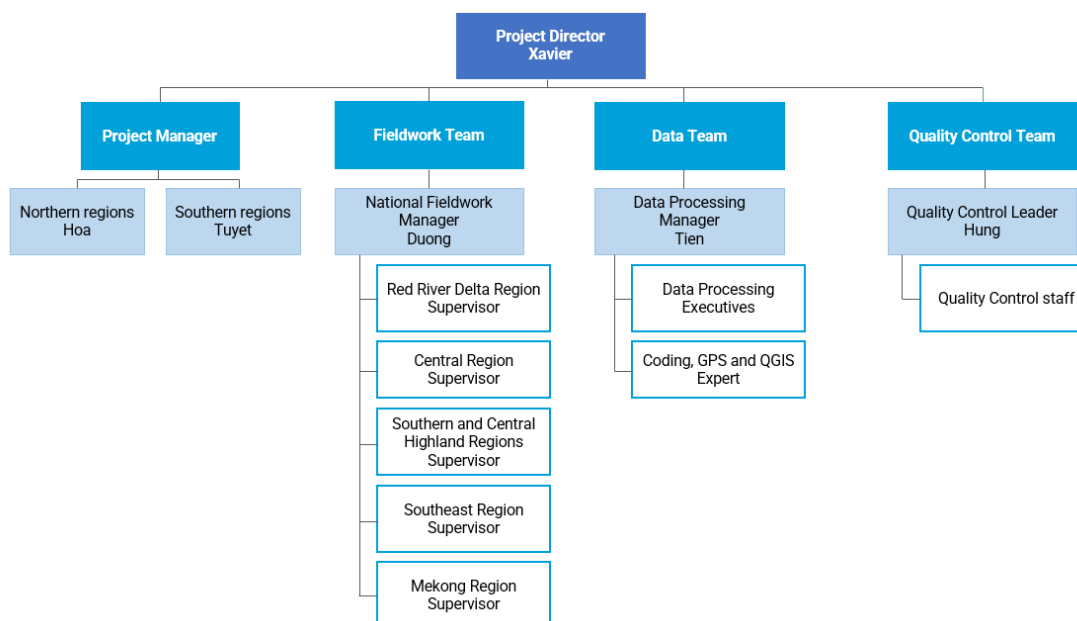
I – CONSULTANT'S PROJECT TEAM

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Project organization chart:

Figure 1 describes the structure and composition of IRL Vietnam team for the project. The project involves 13 full-time staffs, nearly 200 part-time staffs including 175 interviewers.

Figure 1. Project Organization chart



III – PROJECT INFORMATION

1. Project objectives

IRL implemented the data collection of Vietnam Time Use Survey project in 2022 in order to support World Bank on collecting gender disaggregated data to monitor gender gaps:

- (a) Contribute to the gender disaggregated time use data in Vietnam
- (b) Provide indicators that measure the burden imposed by and differences time spent in unpaid houseworks, such as household chores, taking care of elders and children, in genders, urbanicity, ethnicities.

To reach these objectives, the project interviewed 6,000 respondents across 6 socio-economic regions of Vietnam, covering all kinds of ethnicities, occupations and income levels.

2. Project methodology

2.1. Sampling design

The Vietnam Time Use Survey 2022 project adopted a multi-stage area probability sample strategy (Figure 2) made up of a two-level hierarchy of geographical units, at region (Primary Sampling Units – PSUs) and commune/ward level (Secondary Sampling Units – SSUs).

Figure 2. Multi-Stage Area Probability Sample Strategy



Regional level

6,000 samples were stratified by 6 socio-economic regions. The samples were allocated proportionally, with over-sampling in the urban areas and in the Central Highlands to have a sample size reaching economy of cost. In the final sample allocation, we have 400 enumeration areas including 153 EAs in urban and 247 EAs in rural.

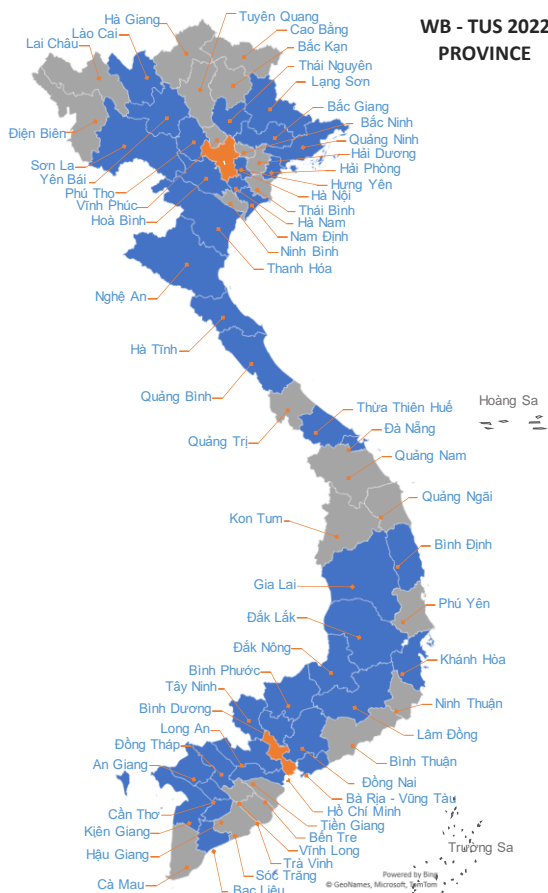
Figure 3. Final Sample allocation by region for Vietnam Time Use Survey 2022

Region	Sample share by region	Adjusted Sample	Share of Urban Population	Urban Sample	Urban EA's	Share of Rural	Rural Sample	Rural EA's	Total sample
North	12%	720	25%	180	12	75%	540	36	720
Red River Delta	23%	1,380	36%	495	33	64%	885	59	1,380
Coastal	20%	1,200	31%	375	25	69%	825	55	1,200
Central Highlands	7%	405	41%	165	11	59%	240	16	405
Southeast	20%	1,200	64%	765	51	36%	435	29	1,200
Mekong River Delta	18%	1,095	29%	315	21	71%	780	52	1,095
Total	100%	6,000	38%	2,295	153	62%	3,705	247	6,000

Province Level

Upon discussion with World Bank and sampling experts from the General Statistics Office a total of 40 provinces were selected to represent all 6 socio-economic regions and to balance between timeline – budget aspects of the project.

Figure 4. Map of 40 Provinces selected for Vietnam Time Use Survey 2022



Commune/ Ward Level

Commune (in rural) or Ward (in urban) are used as Secondary Sampling Unit (SSUs) in this survey. Each SSUs is considered as a enumeration area (EA) of 15 samples. From the baseline list of 1,603 SSUs extracted from VHLSS¹, a list of 600 EAs were randomly drawn, proportional to urbanicity of each region by IRL. The list of 600 EAs include 400 main EAs and 200 reserved EAs (Figure 5).

During fieldwork implementation, the reserved EAs were used only in cases that IRL field team identified or confirmed the inaccessibility of a main EA. Then, an EA from the same urbanicity area in a region was selected as a replacement.

¹ Vietnam Household Living Standard Survey by the General Statistics Office of Vietnam

Figure 5. Final Sample allocation by Ward Level

Region	Main Sampling (No. of SSUs)			Reserved Sampling (No. of SSUs)			Total Main and Reserved
	Urban	Rural	Total Main	Urban	Rural	Total Reserved	
North	12	36	48	6	18	24	72
Red River Delta	33	59	92	17	29	46	138
Coastal	25	55	80	13	27	40	120
Central Highlands	11	16	27	6	8	14	41
Southeast	51	29	80	26	14	40	120
Mekong River Delta	21	52	73	10	26	36	109
Grand Total	153	247	400	78	122	200	600

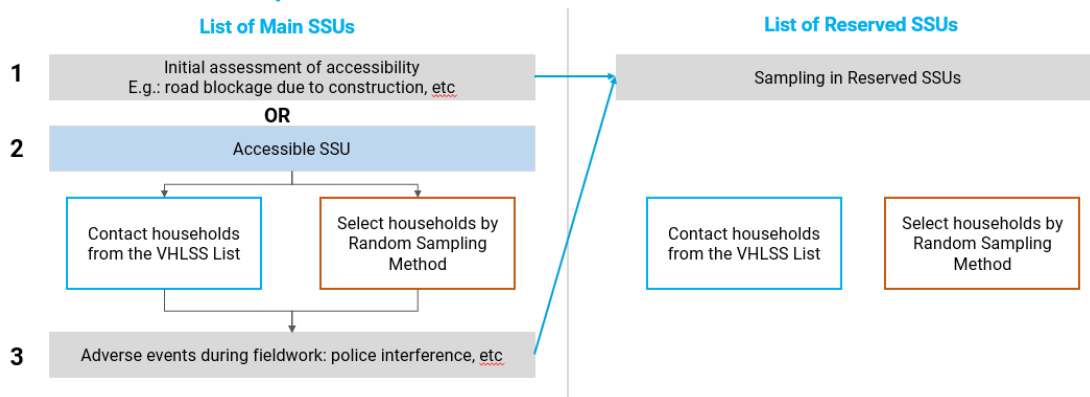
Household Selection

The targeted respondents for the Vietnam Time Use Survey 2022 are Vietnamese residents from 15 to 64 years old, living in eligible household structures, who are physically and mentally able to participate in a 45 minutes survey. The universe of households was mixed between a baseline contact list provided by The World Bank from the VHLSS and the general population selected by random sampling methodology.

- A baseline contact list of 20 households for each enumeration area was randomly drawn by GSO from the recent VHLSS database. Each household was assigned with a single code to identify in a particular enumeration area. For each enumeration area, IRL received a list of 15 main households and 5 reserved households. The list was used to reach 15 completed interviews per enumeration area.
- IRL adopted random sampling method to select households outside of the baseline contact list in a single EA. This method was approved to compensate for the refused households, in order to prioritise sampling in the main list of SSUs. The random sampling protocol required interviewers to follow a right-hand rule route, with skipping interval of maximum 3 households after a completed interview in the urban areas, and maximum 1 household in the rural areas.
- Household selection by random sampling method was done on a rolling-basis. Upon a household in the VHLSS list reach a permanent negative contact result e.g. straight refusal, IRL field team were allowed to select another household to compensate by random sampling method. The total households selected by random sampling method could not be more than the number of households from the VHLSS list with refusal or uncontactable permanent results in a particular EA. For the detailed protocol, refer to Annex 6 – Amendment of Contact Protocol and Annex 1 – Operational Protocol.

The prioritisation adopted in Household selection is described in Figure 6 below.

Figure 6. Household selection using both VHLSS list and Random Sampling Method in prioritisation of Main SSUs over Reserved SSUs



Respondent selection

The eligible and participating households were required to list out a household roster of all members, except those who are physically and/or mentally disabled.

Respondent was selected by Kishgrid method, embedded in the digital data collection instruments.

Figure 7. Respondent selection by Kishgrid method

# household members from 15 – 64 y.o	Year of birth	Last digit in the household ID number									
		1	2	3	4	5	6	7	8	9	0
1		1	1	1	1	1	1	1	1	1	1
2		2	1	2	1	2	1	2	1	2	1
3		1	2	3	1	2	3	1	2	3	1
4		2	3	4	1	2	3	4	1	2	3
5		4	5	1	2	3	4	5	1	2	3
6		4	5	6	1	2	3	4	5	6	1
7		2	3	4	5	6	7	1	2	3	4
8		5	6	7	8	1	2	3	4	5	6
9		7	8	9	1	2	3	4	5	6	7
10		8	9	10	1	2	3	4	5	6	7
11		8	9	10	11	1	2	3	4	5	6
12		7	8	9	10	11	12	1	2	3	4

The selected respondent was determined by two factors:

- (i) The last digit in the household ID number.

Each household in the VHLSS List were given a distinct, continuously ID number. A list of 20 spare household ID numbers were created for Random Sampling Method for each EA. All household ID numbers in the Random Sampling Method are distinct from the household ID numbers in the VHLSS List.

- (ii) Number of household members eligible for the survey: From 15 to 64 years old, aren't physically and/or mentally disabled.

Respondent replacement:

In order to retain and prioritise the survey execution within the main SSUs, the approved protocol allowed the field team to replace the selected respondent once, only for cases from the VHLSS List. The 2nd selected respondent were be chosen by running Kishgrid method again, excluding 1 member of the household who is the 1st selected respondent.

3. Project coverage

In total, the survey counts n=6001 samples after 75 days of fieldwork. Below are the sample distribution by EA level and Household level.

Commune / Ward level (EA level)

The sample was completed in 410 EAs: 372 initially drawn main EAs (91%) and 38 replacement EAs (9%)

Figure 8. Project coverage of final sample distribution by EA level

Region	Rural EAs			Urban			Total Main EAs	Total Replace EAs	Grand Total
	Main	Replace	Total	Main	Replace	Total			
North	33	7	40	11	1	12	44	8	52
Red River Delta	59	3	62	31	2	33	90	5	95
Coastal	43	12	55	24	1	25	67	13	80
Central Highlands	15	1	16	11	0	11	26	1	27
Southeast	25	4	29	49	3	52	74	7	81
Mekong River Delta	52	2	54	19	2	21	71	4	75
Grand Total	227	29	256	145	9	154	372	38	410

- In 154 final Urban EAs, 9 EAs (6%) were the replacement EAs.
- In 256 final Rural EAs, 29 EAs (11%) were the replacement EAs. The proportion of replacement EAs in the rural was nearly double compared to the urban.
- Central Highlands completed the sample size in 26 initial drawn main EAs (96%).
- Coastal region had the highest percentage of EAs replacement – 13 EAs (16%).
- The percentage of EAs replacement in Northern mountainous regions was high also – 8 EAs (15%)

Figure 9. EA's replacements vs planned

Region	Initial EAs allocation	Total Main EAs	Total Replace EAs	Final realized EAs
North	48	44	8	52
Red River Delta	92	90	5	95
Coastal	80	67	13	80
Central Highlands	27	26	1	27
Southeast	80	74	7	81
Mekong River Delta	73	71	4	75
Grand Total	400	372	38	410

- In Northern region, Red River Delta, Southeast, and Mekong River Delta, the number of final realized EAs were higher than the initial allocation.
- In these regions, the remaining samples of some EAs had to be completed at additional EAs, because the local police interfered in the initial drawn EAs.

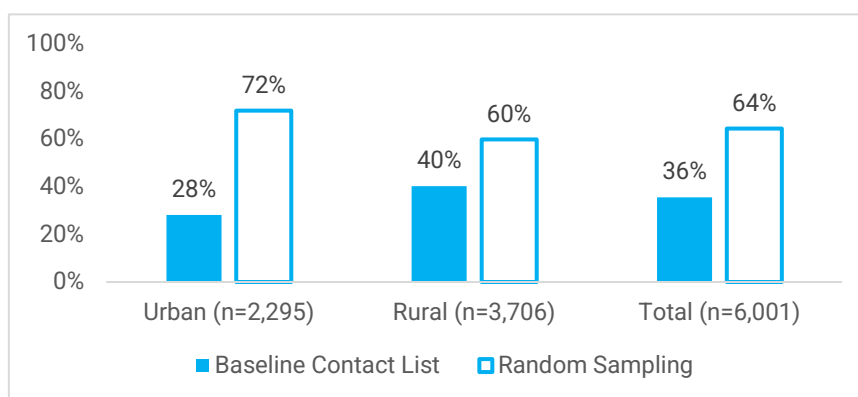
Household level

Out of the total n=6,001 sample achieved, 36% (n=2,133) respondents were from the VHLSS List and 64% (n=3,868) respondents were recruited following Random Sampling Method.

Figure 10. Project coverage of final sample distribution, by Household selection methodology

Regions	Urban			Rural			Grand Total
	Baseline Contact List	Random sampling	Total	Baseline Contact List	Random sampling	Total	
North	89	91	180	394	146	540	720
Red River Delta	131	364	495	231	654	885	1380
Coastal	123	252	375	422	403	825	1200
Central Highlands	41	124	165	80	160	240	405
Southeast	156	609	765	91	344	435	1200
Mekong River Delta	105	210	315	270	511	781	1096
Grand Total	645	1650	2295	1488	2218	3706	6001

Figure 11. Percentage of sample achieved by type of Household selection methodology



In urban areas, the proportion of completed interviews from the VHLSS List were 12 pts (28%) lower than in rural areas (40%). In urban areas, IRL team completed 72% samples from Random Sampling Method while in rural areas the percentage of that was 60%.

Refer to Annex A for the Map of Main / Replace EA and GPS points of Baseline Contact List / Random sampling interviews.

B – PROJECT PREPARATION

I – MATERIALS PREPARATION

In order to implement and maintain the consistency for a large-scale project, IRL team developed 6 operational protocols:

- (1) Operational Protocol – Annex 1
- (2) Quality Control Protocol – Annex 2
- (3) Data Entry Protocol – Annex 3
- (4) Data Confidentiality Protocol – Annex 4
- (5) Training Guide for Interviewers – Annex 5
- (6) Amendment of Contact Protocol – Annex 6

All 6 annexes are submitted as part of the technical report and deliverables for the project.

II – PILOT PHASE

Purpose

The pilot phase was carried out to test and identify challenges in:

- Making contact with households and respondents
- Test the interviewing protocol: respondent selection, asset and individual part, diary part
- Test the software used for data entry – SurveytoGo

Timeline

- Pilot was carried out in 4 days: Saturday (10/09) to Tuesday (13/09)
- 2 training sessions for selected interviewers: training in Ha Noi on Thursday (8/9), in Ho Chi Minh city with field team from Da Nang observing online on Friday (9/9)

Sample size and coverage

In the Pilot phase, IRL completed 60 interviews across 3 provinces.

Figure 12. Sampling distribution for Pilot phase

Province	District	Ward (EA)	Urbanity	Sample size
Hà Nội	Quận Đống Đa	Phường Hàng Bột	Urban	10
Hà Nội	Huyện Thanh Oai	Thị trấn Kim Bài	Rural	10
Đà Nẵng	Huyện Hòa Vang	Hòa Nhơn	Rural	10
Đà Nẵng	Quận Hải Châu	Bình Hiên	Urban	10
TP. HCM	Quận Bình Thạnh	Phường 26	Urban	10
TP. HCM	Huyện Hóc Môn	Đông Thạnh	Rural	10
Total				60

- The sampled wards are chosen randomly from baseline universe of VHLSS given by GSO
- Soft-quota on day of the week for each city: 50% - weekdays, 50% - weekend

III – INTERVIEWER TRAINING FOR MAIN FIELDWORK

In the preparation stage and throughout the fieldwork stage, IRL carried out 11 training sessions to complete fieldwork in 40 provinces. Around 200 interviewers were trained to complete this project. Each training session was executed in 2 days:

- Day 1: Training on Fieldwork Protocol.
- Day 2: Revision, mock-up interview with internal team, observation of 1-2 first interviews.

Figure 13. Training dates

No.	Training dates	Training for Field teams
1	05/10/2022	Hanoi and Ho Chi Minh city, Red River Delta area, Northern mountainous area
2	6-7/10/2022	Hai Phong and Quang Ninh
3	7-8/10/2022	Mekong River Delta area
4	10/10/2022	Da Nang and Hue
5	11-12/10/2022	Dong Nai, Ba Ria-Vung Tau
6	12-13/10/2022	Binh Dinh
7	14-15/10/2022	Central Highlands area
8	15-16/10/2022	Nam Dinh
9	16-17/10/2022	Thanh Hoa, Ha Tinh, Quang Binh
10	18-19/10/2022	Nghe An
11	21-22/10/2022	Khanh Hoa

The 1st training session occurred on the 5th October. It was hosted in Hanoi and Ho Chi Minh city concurrently, the 2 cities were connected online. In Hanoi, 40 IRL interviewers, World Bank and GSO enumerators attended directly. In Ho Chi Minh city, 20 IRL interviewers attended at IRL Ho Chi Minh city office.

Figure 14. Centralised training for interviewers in Hanoi and Ho Chi Minh city



Figure 15. Training for interviewers in Can Tho



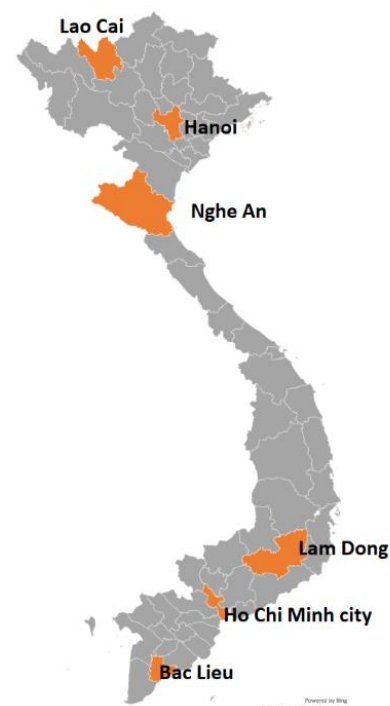
C – MAIN FIELDWORK

I – FIELD OBSERVATION WITH WORLD BANK AND GSO

Observation was conducted by The World Bank and GSO teams in 6 provinces across 6 regions.

Figure 16. Field observation dates and map

28-29/11	<ul style="list-style-type: none"> Lam Dong province
30/11 – 1/12	<ul style="list-style-type: none"> Ho Chi Minh city
3-4/12	<ul style="list-style-type: none"> Bac Lieu province
6-7/12	<ul style="list-style-type: none"> Nghe An province
10-11/12	<ul style="list-style-type: none"> Lao Cai province
13-14/12	<ul style="list-style-type: none"> Ha Noi



D – QUALITY CONTROL

I – LOGIC AND CONSISTENCY CHECK OF RAW DATA

IRL submitted 4 SPSS files as final deliverables for this project:

- 1_COVER file contains the basic information of the interview and the household asset part.
- 2_MEMBER file contains the household structure, information of each member for 6,001 households.
- 3_INDIVIDUAL file contains the educational and employment information of 6,001 selected respondents.
- 4_DIARY file contains the time use diaries and activities of 6,001 selected respondents.

Throughout the project implementation, IRL carried out multiple data checks to ensure data across files are coded correctly and consistently. Logic and consistency checks are done by Data Processing team independently with the quality checks from Quality Control team. The dataset was sent to Mr. Ignace GLORIEUX, President of the International Association for Time Use Research (IATUR), who provided his guidance on the review of the instrument and an in-depth review of the delivered dataset to ensure compliance with international standards.

Figure 17. Logic checks carried out in the data check stage

No.	Logic checks	Explanation
1	Time of interview	Interview time mustn't be between over-night hours from 10:30 PM to 7AM. Cases happened during over-night hours must have acceptable explanation from the fieldteam to be included in the final dataset.
2	Income	Logic checks across 3 variables: S33_Income in cash or kinds in the last 30 days of the selected respondent Q51_Average household monthly income Q52_Income per capita
3	Number of people in the household, Respondent code	Should be consistent across 1_COVER, 2_MEMBER files
4	Assets	All special cases which the respondent lives in urban areas and owns a boat are re-checked by recording
5	Number of main activities in time use diary	For respondents answered that the diary recorded their normal days, the number of main activities shouldn't below 10. <i>Special cases were included in the final dataset if acceptable explanation was provided after additional recording check.</i>
6	Secondary activities in time use diary	Diaries recorded normal days of the respondents, less than 20 main activities, less than 2 secondary activities; And no activities code 1001, 1401, 1402, 1403, 1404 were captured. <i>Special cases were included in the final dataset if acceptable explanation was provided after additional recording check.</i>
7	Interpreter	Interviews conducted with respondents living in urban area and whose ethnicity are Kinh shouldn't require Interpreter
8	Time use diary	-Q403, Q404, Q406A, Q407A mustn't be blank for all main activities -For all main activities, either of int 1/2/3/4/5/6 should = Yes if Q404 = 2_In company
9	Basic activities	All diaries should have at least 1 activity of 1501 (Sleeping), 1502 (Eating), 1503 (Personal hygiene). <i>Special cases were included in the final dataset if acceptable explanation was provided after additional recording check.</i>

II-Fieldwork quality control

A specific quality control protocol was developed for this project to balance with both IRL's quality standards and the project requirements. Below is the list of quality control metrics were carried out to validate the fieldwork:

Figure 18. Proposed versus applied quality control methods and results

No.	Quality control method	Proposed / As per protocol	Actual
0	Total quality control	As per IRL normal standard, a minimum of 30% of all the sample sizes should be checked by different methods Equivalent to n=1800 samples	IRL quality control team checked 2811 interviews by different methods for the project. The final rate of QC was 47%.
1	Silent recording checks	Minimum of 30% over all samples, equivalent to n=1800 interviews	IRL quality control team checked 1791 interviews purely by silent recordings. The final rate was 30%, noted with the fact that there are multiple cases were other quality checks had been carried out
2	Back-check by telephone	Minimum of 10% over all samples, equivalent to n=600 interviews	IRL quality control team checked 970 interviews by call-back on telephone method. The final rate of QC was 16%.
3	GPS check	Check on 100% samples systematically	100% samples were checked on GPS by QGIS software automatically. Special cases are re-checked manually, by silent recording or call-back method
4	Length of interview	Check on 100% samples systematically	100% samples were checked on GPS by QGIS software automatically. Special cases are re-checked manually by silent recording method
5	QC of QC	Check on 10% of interviews by QC Leader which had been checked by QC staffs	280 interviews were checked by QC Leader, equivalent to 10% of the interviews checked by QC staffs
6	Check by upload time, productivity check	Check on 100% samples and 100% interviewers systematically	Checked on 100% samples and interviewers, integrated into the data check protocol of Data Processing team
7	Field observation	As proposed, 10% of samples would be observed by field supervisors, equivalent to n=600 interviews	196 interviews were observed by supervisors and project managers, equivalent by 3%. This rate is lower than our initial estimate but it does not include the field observation carried out with the participant of project managers, World Bank and GSO team.

8	Data entry check	<p>For paper questionnaire, data entry should be conducted twice if it is manually entered</p> <p>-As per the final approved protocol, IRL team used a mix-methodology: half of the survey is entered digitally, the Time Use Survey part is entered manually.</p> <p>-Interviewers must stay at the interviewed household to finalize all coding of activities. Then, interviewers would entered digitally the codes of all activities in a continuous sequence.</p> <p>-A data entry team within our premises was responsible to digitalize all diaries. The data entry form was automatically checked with embedded logic indicators.</p> <p>-An independent Coding expert and team double-check 20% (n=1200) the coding accuracy of all time use diaries.</p> <p>-Overall, the diaries were entered for minimum 2 times, and checked twice by 2 independent teams.</p>
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In the total n=6001 achieved samples:

- 2811 samples (47%) were checked by QC team. In 2811 samples:
 - 2590 samples (91%) were qualified after quality control, including: 1019 samples (36% of the total sample checked) were qualified after the 1st check, 1571 samples (56% of the total sample checked) were qualified after the 1st check and additional verification,
 - 221 samples (8%) were disqualified after quality control. In these 221 samples:
 - 18 samples (8%) are disqualified because of incorrectly administration of respondent selection method or sampling method
 - 8 samples (4%) are disqualified due to errors in audio recording
 - 29 samples (13%) are disqualified due to fabrication
 - 28 samples (13%) are disqualified since the respondents couldn't be verified.
 - 138 samples (62%) are disqualified since QC and FW team couldn't re-contact the respondent with the given phone numbers.

FINAL WORDS

Thanks to the strong support of the project team by The World Bank and independent experts, the Vietnam Time Use survey has been implemented as scheduled and up to the highest quality standards, including both VHLSS respondents and randomly selected household within the same locations.

Indochina Research team would like to sincerely thank The World Bank, GSO and the independent experts we worked with all along the project, particularly Mrs Judy Yang and Mr Nguyen Tam Giang. Thank you for trusting us in implementing such an important National level research that will resonate not only in Vietnam but also internationally. We would be looking forward the opportunity to continue the cooperation with The World Bank Group in conducting important social research work supporting Vietnam's social development in the future.

ANNEX A: MAP OF 6,001 SAMPLES

Legend :

- (i) GPS Point:
 - Green: Baseline Contact List
 - Orange: Random Sampling
- (ii) Enumeration areas:
 - Purple: Main EA
 - Red: Replaced EA

