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**PROGRAM FOR THE HARMONIZATION AND MODERNIZATION OF HOUSEHOLD  
LIVING CONDITIONS SURVEYS IN UEMOA MEMBER STATES**

**ENQUETE HARMONISEE SUR LES CONDITIONS DE VIE DES MENAGES (EHCVM)/**

**HARMONIZED SURVEY ON HOUSEHOLDS LIVING STANDARDS**

**BASIC INFORMATION DOCUMENT OF THE SECOND EDITION**

Septembre 2023



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# **1. Introduction**

## **Context**

L'Enquête Harmonisée sur les Conditions de vie des Ménages (EHCVM) is a joint initiative by the UEMOA Commission and the World Bank. It is conducted within the framework of the Program for the Harmonization and Modernization of Household Living Standard Surveys (Programme d'Harmonisation et de Modernisation des Enquêtes sur les Conditions de Vie des Ménages - PHMECV).

The objective of the Program is to support the UEMOA Commission in strengthening the capacities of its Member States to conduct household living conditions surveys that meet regional harmonized standards and to make the collected micro-data accessible to the public. The specific objectives include producing poverty and living conditions indicators and harmonized databases to enable analyses that inform public policies.

The beneficiaries are the eight UEMOA member countries: Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo. Besides these PHMECV beneficiary countries, Cameroon, Congo, Guinea, and Chad have also conducted similar surveys using the same methodologies and participated in various technical workshops. The first edition of the survey took place in 2018/19, and the second edition, which is the subject of this document, was conducted in 2021/22.

The survey consists of four components: a household component, a community component, a non-standard units (NSU) component, and a price component.

## **Partners**

The survey was designed and conducted through a collaboration between the National Institutes of Statistics (INS), the UEMOA Commission, and the World Bank. The BCEAO, BOAD, and AFRISTAT also supported the process.

The INS were central to the process at all stages (design, preparation, data collection, data processing, and analysis).

## **Funding**

The program is funded by the World Bank through a \$402 million grant to the UEMOA Commission. For Benin, the allocated funding is \$42 million.

## **Technical Assistance**

The UEMOA Commission and the World Bank provided technical assistance to the INS throughout the project's implementation. The technical assistance was provided through missions and regional workshops.

They provided the necessary expertise for coordination to support the harmonization process so that the indicators produced are comparable. These institutions also supported the modernization process in the data collection phases (CAPI) and

methodological phases (e.g., the introduction of the “panel” dimension in the second edition).

### **Document Organization**

This document is designed to provide the necessary information to understand the data from the second edition of the Harmonized Survey on Household Living Standards (EHCVM 2). It is composed of seven parts. After the introduction, part 2 presents the survey characteristics. The survey instruments are presented in part 3, and sampling issues are discussed in part 4. The document then describes the fieldwork organization in part 5, presents the main collection results in part 6, and describes the databases in part 7.

## **2. Survey Characteristics**

### **2.1. Household and Community Components**

The household and community components of the survey are organized in two waves. Each wave covers half of the sample clusters and half of the household sample. This organization in two waves allows for taking into account seasonal variations in consumption throughout the year. Prior to the main survey, a census of all households in the clusters is conducted each time.

### **2.2. Non-Standard Units (NSU) Component**

The last component of the survey relates to non-standard units. This component produces factors to convert non-standard consumption units used in households (heap, bowl, ear) into standard units (kilogram, liter).

Information on non-standard units was collected during the 2018/19 edition, and the conversion factors produced are still valid. Therefore, it was not necessary to conduct a new collection for this component. However, additional data was collected to complete some missing units. For this second edition, a questionnaire on units for agricultural products was also administered. A list of crop-unit-state combinations for products often reported in non-standard units was created.

### **2.3. Price Component**

The price component is organized differently. It operates parallel and independently of the household and community components. Price recordings are made monthly, not only throughout the duration of the data collection during the two waves but also during the break period between the two waves.

### 3. Data Collection Instruments

The survey **used** four main questionnaires: a household questionnaire, a community questionnaire, a price questionnaire, and a non-standard units questionnaire.

#### 3.1. Household Questionnaire

The household questionnaire collects information at both the household and individual levels. Apart from the cover page and Section 0 on household identification and control information, the household questionnaire comprises twenty (20) sections..

The contents of the household questionnaire are detailed as follows::

- **Cover:** The cover contains information related to the identification and geospatial location of the household. This section also records basic information about the head of the surveyed household.
- **Section 0: Household Identification and Control Information:** This section provides detailed geographical location of the household. It also records data on the interview process, including visit dates and the language of the interview and the GPS coordinates of the household.
- **Section 1: Sociodemographic Characteristics of Household Members:** This section concerns all household members. It contains the list of household individuals and provides sociodemographic characteristics such as relationship to the head of the household, age, marital status, religion, residency status, nationality, ethnicity, survival of parents, educational level, the sector of activity, and the profession of the father and mother, etc.
- **Section 2: Education (individuals aged 3 years and older):** This section concerns individuals aged three years and older. It includes variables for literacy, schooling, and the educational level of the individual. The section also provides information on the individual's journey through the education system, including difficulties encountered and expenses incurred.
- **Section 3: Health:** This section is filled out for all household members. It provides information on major health issues and consultations that household members had in the 30 days preceding the visit by the survey agent. The section addresses the main constraints and difficulties regarding the quality and access to health services. It then examines consultations and health expenses over the last three months, and hospitalizations and expenses over the twelve months preceding the survey. This section also deals with disabilities of persons aged 5 years and older.
- **Section 4: Employment:** The employment section is dedicated to household members aged 5 years and older. It contains three sub-sections: participation in the labor market, main employment, and secondary employment.
  - **Part A: Employment Status (individuals aged 5 years and older):** This sub-section collects information on participation in the labor market for all individuals aged 5 years and older. It specifically addresses the household member's time use and variables capturing their participation in the labor market during the 7 days preceding the visit by the survey agent. It also covers the job search process undertaken 30 days before the survey agent's visit.
  - **Part B: Main Employment in the Last 12 Months (individuals aged 5 years and older):** This part concerns individuals who have worked in the

last 12 months and collects information on the characteristics of the main job. Data collected includes profession, sector of activity, socio-professional category, institutional sector, and for employees, salary and other benefits in kind.

- **Part C: Secondary Employment in the Last 12 Months (individuals aged 5 years and older):** This sub-section focuses on information related to secondary employment held in the 12 months preceding the survey agent's visit for those identified as having one. The information collected is similar to that of the previous section.
- **Section 5: Non-Employment Income in the Last 12 Months (individuals aged 15 years and older):** This part collects information on income not related to employment for all persons aged 15 years and older. The questionnaire explores pensions and other public transfers, rents, and other financial and property income. Private monetary transfers are not covered; they are addressed in Section 13.
- **Section 6: Savings and Credit (individuals aged 15 years and older):** This section collects data on access to financial institutions and prepaid services, savings accumulated, loans or credits contracted, repayments made, and upcoming payment deadlines for household members aged 15 years and older.
- **Section 7: Food Consumption:** This section collects data on household food consumption. Food consumption has two aspects: meals taken outside the home by consumption period (breakfast, lunch, dinner, snack), and consumption within the household by consumption item. This section has two main parts:
  - **Part A: Meals Taken Outside the Household in the Last 7 Days:** It collects information on meals consumed by one or more household members in the seven days preceding the visit by the survey agent.
  - **Part B: Food Consumption in the Last 7 Days and Purchases in the Last 30 Days:** This part collects information on items consumed in the household in the seven days preceding the visit by the survey agent. For each item, the section provides information on quantities consumed, the mode of acquisition (purchase, self-consumption, gift received). If the product consumed was purchased in the 30 days preceding the interview, the last quantity purchased and the value of this purchase are also recorded.
- **Section 8: Food Security:** This module contains information on the household's resources' ability to ensure food security for its members, according to the FAO's FIES approach. Basic food security questions are asked for a 12-month period preceding the interview.
- **Section 9: Retrospective Household Food and Non-Food Expenditure:** This section includes six sub-sections covering most non-food expenditures, except for expenses on phone credit recharge (Section 1), education (Section 2), health (Section 3), and housing (Section 11).
  - **Part A: Expenditures on Celebrations and Ceremonies in the Last 12 Months:** This part provides information on expenses incurred during celebrations and ceremonies such as religious holidays, weddings, funerals, baptisms, etc., organized by the household.



Variables recorded cover expenditures on food, drinks, clothing and shoes, hall rentals, etc.

- **Part B: Non-Food Expenditures in the Last 7 Days:** This part collects information on non-food expenditures as frequent as food expenditures, such as cigarettes, kerosene, firewood, fuel, urban transport, newspapers, etc. The main variable recorded is the amount of the expenditure.
- **Part C: Non-Food Expenditures in the Last 30 Days:** This part provides information on expenditures for items like wines and liquors, domestic gas, domestic staff wages, and other relatively frequent household operating expenses. The main variable recorded is the amount of the expenditure.
- **Part D: Non-Food Expenditures in the Last 3 Months:** This part provides information on expenditures for items such as intercity transport, entertainment costs, postal services, gardening, pet care, etc. The main variable recorded is the amount of the expenditure.
- **Part E: Non-Food Expenditures in the Last 6 Months:** This part provides information on expenditures for clothing and shoes purchased outside of celebrations and ceremonies. The main variable recorded is the amount of the expenditure.
- **Part F: Non-Food Expenditures in the Last 12 Months:** This part relates to annual or less frequent expenditures, such as housing investment, housing repairs, international travel, acquisition of durable goods, etc. The main variable recorded is the amount of the expenditure.
- **Section 10: Non-Agricultural Enterprises:** This section concerns non-agricultural enterprises owned by the household.
  - **Part A: Existence of Non-Agricultural Enterprises:** In this part, the survey indicates whether the household owns at least one non-agricultural enterprise.
  - **Part B: Characteristics of Non-Agricultural Enterprises:** It collects detailed information on non-agricultural enterprises owned by the household. The section provides information on the owner of the enterprise, the sector of activity, the age of the enterprise, the degree of formalization, variables for calculating accounting aggregates, family labor, and salaried labor.
- **Section 11: Housing Characteristics:** This section concerns the characteristics of household dwellings, including the type of materials used for the roof, floor, and walls, as well as amenities (electricity, water, sanitation, toilets, etc.). The section also details housing expenses (rent, water bills, electricity bills, fixed phone bills, etc.).
- **Section 12: Household Assets:** This section collects information on the household's durable goods, including household appliances, furniture, means of transportation, etc. The goods considered must be in good working condition. For each good, the section records the number owned by the household. For the most recently acquired good, it records the age, acquisition value, and replacement cost.
- **Section 13: Transfers Received by the Household:** This section collects information on transfers received by the household from other households. It

provides detailed information on the sender's characteristics, the reason for the transfer, the transaction channel used, and the amount received.

**Note: Unlike the first edition, the sub-section on transfers sent (13B) was not included.**

- **Section 14: Shocks and Coping Strategies:** This section collects information on shocks experienced by the household. It contains two parts:
  - **Part A: COVID-19 and Impact on Households:** This sub-section relates to shocks directly linked to the COVID-19 pandemic that emerged in 2020. It focuses on potential shocks (illness, reduced working hours, decreased transfers, etc.) that occurred in the household. It also assesses the households' resilience to these shocks.
  - **Part B: Other Shocks and Coping Strategies:** These shocks are related to employment, income, health, natural disasters, etc. The section provides detailed information on the consequences of the shocks and the possible strategies used to mitigate their effects.
- **Section 15: Safety Nets:** This section provides information on access to social security programs such as food distribution, free healthcare for children and pregnant women. Variables collected include the nature and frequency of the aid received, the exact beneficiaries within the household, and the difficulties encountered in receiving the various aids
- **Section 16: Agriculture :** This section pertains to agricultural activities conducted by the household. It consists of four subsections.
  - **Part A: Fields and plots :** This subsection provides information on the characteristics of the plots cultivated by the household, including the identity of the farmer, the area of each plot, the crops grown, the mode of occupation, the labor used, the use of inputs, etc.
  - **Part B: Cost of inputs :** This subsection provides information on the cost of inputs used by the household, the quantity used, and the source of supply.
  - **Part C: Crops :** This subsection allows listing the crops grown on the plots cultivated by the household. For each of these crops, information on the harvest is collected.
  - **Part D: Use of production :** For each crop, this subsection addresses the use of the production (consumption, sale, stock).
- **Section 17: Livestock:** This section is dedicated to livestock activities practiced by the household. The household may own these animals or raise them for others. For each type of animal, the section captures the number of animals owned, the operating costs incurred, and the amount of sales of livestock products (animals, meat, milk, eggs, and other by-products).
- **Section 18: Fishing:** This section identifies households that practice fishing. It provides information on the quantities and types of fish caught, the operating costs, the income generated, etc.
- **Section 19: Agricultural equipment:** This section identifies the equipment owned by the household for agricultural, livestock, and fishing activities. For each piece of equipment, it captures information on its age, acquisition value, and current estimated value by the household.
- **Section 20: Subjective poverty, Governance, Peace, and Security:** This section provides information on themes related to monetary poverty and living conditions.

- **Part A: Subjective poverty:** This subsection allows for an assessment of households' perceptions of their living standards.
- **Part B : Governance.** This subsection pertains to governance issues, including individual freedoms, participation in major decisions, corruption, etc.
- **Part C: Peace and Security.** This last part addresses security issues, evaluating whether people feel safe and if individuals have been victims of aggression.

***Note: Parts B and C of section 20 were not included in the first edition of the questionnaire.***

### 3.2. Community Questionnaire

This instrument allowed for the collection of essential information about local communities. It is completed in the form of a focus group within the village/neighborhood where the cluster is located. It contains four main sections that gather general data about the community, basic social infrastructure, agricultural activity, and community participation in activities.

- **Cover :** This section contains geospatial location information about the cluster. It also includes basic information about the chief of the surveyed neighborhood/village.
- **Section 0: List of Respondents:** This section contains the list of people who provided the information collected about the community. It also gathers the following sociodemographic characteristics of these respondents: gender, age, role in the community, number of years living in the community, and level of education.
- **Section 1: General Characteristics of the Neighborhood/Village:** This section gathers sociodemographic, economic, geographic, and living condition information at the community level. This includes population size, languages spoken, topography, distance from the nearest city, accessibility, associative organization, access to electricity, drinking water, and mobile phone networks.
- **Section 2: Existence and Accessibility to Social Services:** This section relates to the social infrastructure existing in the village/neighborhood. For each infrastructure, the questionnaire provides information on accessibility in terms of means of transport to access the infrastructure, the time needed between the community and the infrastructure, and the problems encountered in using the service.
- **Section 3: Agriculture:** This section provides information on the agricultural activity of the village/neighborhood. It collects data on the crops grown, the existence of agricultural cooperatives, access to agricultural equipment, and the possible use of improved agricultural techniques, etc.
- **Section 4: Community Participation:** This subsection collects data on citizens' participation in community life and their sense of ownership when it comes to the construction and maintenance of infrastructures such as roads, bridges, schools, health centers, boreholes/wells, and markets.

### 3.3. Questionnaire on Non-Standard Units

This questionnaire consists of a cover and three sections.

**Cover :** The cover contains information related to the identification and geospatial location of the market. It also records the name of the market and the number of visits made by the teams.

**Section 0 : Control Information:** This section provides information on the geographic location and operating days of the market.

**Section 1 : Recording the Weights and Prices of Non-Standard Consumption Units:** For each combination of product-unit-size of the non-standard unit, the consumption product is weighed and the corresponding weight is recorded in kilograms.

**Section 2 : Recording the Weights and Prices of Non-Standard Production Units:**

For each combination of crop-unit-state, the agricultural product is weighed and the corresponding weight is recorded in kilograms.

The collection on NSU involves identifying the market and locating the pairs (products; units) for various food products. Agents record the weight and price, then take photos according to the combinations (very small, small, medium, large, very large, eighth, quarter, half, whole, and single size unit). In addition to the market's geographical information, the questionnaire is divided into 12 sections corresponding to groups of various food products:

- Section 0: Market Identification
- Section 1: Cereals and Breads
- Section 2: Meats
- Section 3: Fish and Seafood
- Section 4: Milk, Cheese, and Eggs
- Section 5: Oils and Fats
- Section 6: Fruits
- Section 7: Vegetables
- Section 8: Legumes and Tubers
- Section 9: Sugars, Honey, Chocolate, and Confectionery
- Section 10: Spices and Condiments
- Section 11: Beverages

**3.4. Price Questionnaire**

The price component is designed to record prices in a sample of markets and other points of sale. Price recordings are conducted monthly in points of sale within sample localities. In each department, there are at least two selected localities (one in an urban area and one in a rural area). Points of sale include markets, stores, supermarkets, etc. The price questionnaire records prices for both food and non-food consumer goods, using the consumption modules' nomenclature from the household questionnaire.

**For homogeneous products sold in markets:**

- Section 0: Information about the visited market.
- Section 1 : Information on the weights and prices of the products.

**For products sold outside traditional markets:**

- Section 0 : Information about the visited point of sale.
- Section 1 : Information on the prices of the products.

## 4. Sampling

### 4.1. Household and Community Components

#### ➤ Sampling Frame

The sampling frame for the 2018/19 survey was based on the fourth general population and housing census (RGPH4) of 2013. In 2021/22, an enumeration was conducted in the same clusters.

#### ➤ Sampling Plan

The 2021/22 survey is a panel survey by cluster, and its sampling plan is based on that of the 2018/19 survey.

The 2018/19 survey sample was drawn according to a two-stage stratified sampling plan. The stratum is the combination of department/residence area. In each stratum, clusters (primary sampling units) were chosen at the first stage with a probability proportional to their size in terms of the number of households. At the second stage, 12 households were chosen with equal probability within each cluster.

**Table 1a :** Distribution of the Initial Sample of Clusters

Department	Wave 1			Wave 2			Total
	Urban	Rural	Total	Urban	Rural	Total	
Alibori	5	15	20	6	14	20	40
Atacora	9	15	24	10	14	24	48
Atlantique	20	24	44	21	23	44	88
Borgou	14	14	28	15	13	28	56
Collines	8	18	26	8	17	25	51
Couffo	8	18	26	8	18	26	52
Donga	11	15	26	12	15	27	53
Littoral	29		29	29		29	58
Mono	18	16	34	17	16	33	67
Ouémé	23	12	35	23	13	36	71
Plateau	12	13	25	12	13	25	50
Zou	6	12	18	6	12	18	36
Total	163	172	335	167	168	335	670

The 2018/19 sample was designed to produce precise estimates for the variable of interest, which is annual consumption per person. For a sample size of 8,040 households, the relative error was 1.7% at the national level, varying from 4.5% to 6.4% for the departments.

In 2021/22, the strategy is to revisit the same clusters. This involves either surveying the 12 households from 2018/19 if they are found (after the enumeration phase), or

surveying the found households and completing the sample to 12 in clusters where fewer than 12 households are found during the enumeration phase (either because there were fewer than 12 households in the final 2018/19 database, or because some households could not be located).

**Table 1b : Distribution of the Initial Sample of Clusters**

Department	Wave 1			Wave 2			Total	Relative Error
	Urban	Rural	Total	Urban	Rural	Total		
Alibori	60	180	240	72	168	240	480	5,3%
Atacora	108	180	288	120	168	288	576	6,4%
Atlantique	240	288	528	252	276	528	1056	5,8%
Borgou	168	168	336	180	156	336	672	5,3%
Collines	96	216	312	96	204	300	612	5,8%
Couffo	96	216	312	96	216	312	624	5,3%
Donga	132	180	312	144	180	324	636	5,6%
Littoral	348	-	348	348	-	348	696	4,5%
Mono	216	192	408	204	192	396	804	5,8%
Ouémé	276	144	420	276	156	432	852	4,5%
Plateau	144	156	300	144	156	300	600	6,1%
Zou	72	144	216	72	144	216	432	5,7%
Total	1956	2064	4020	2004	2016	4020	8040	1,7%

## **4.2. NSU Component**

### **➤ Sampling Frame**

The sampling frame is obtained by merging the list of markets visited for price recordings in the EHCVM 1 survey with those visited by the former National Office for Food Security Support (ONASA) for early warning operations on food insecurity. This merger provided a list of 260 markets in urban and rural areas, with their activity periods recorded.

### **➤ Sampling Plan**

Within the 260 markets in the constructed sampling frame, 160 markets were purposively selected based on field knowledge such as market attendance, activity, and accessibility. All communes (the second level of administrative division) were represented in the sample. Each department is then represented by its urban and rural areas.

**Table 2 : Distribution of Markets by Department and by Area of Residence for the Collection on Non-Standard Consumption Units**

Department	Area of residence		Total
	Urban	Rural	
Alibori	3	9	12
Atacora	9	7	16
Atlantique	12	9	21
Borgou	8	10	18
Collines	6	6	12
Couffo	5	6	11
Donga	5	6	11
Littoral	10		10
Mono	8	3	11
Ouémé	12	5	17
Plateau	6	4	10
Zou	7	4	11
<b>Total</b>	<b>91</b>	<b>69</b>	<b>160</b>

### **4.3. Price component**

#### **➤ Sampling Frame**

The sampling frame used is the same as described above for the NSU component. It contains 260 markets.

#### **➤ Sampling Plan**

The sampling of points of sale is based on nearly the same markets selected for the NSU component in all departments, with the exception of Atlantique and Ouémé.



Tableau 3 : Distribution of Markets by Department and by Area of Residence for Price Recordings

Department	Area of residence		Total
	Urban	Rural	
Alibori	3	9	12
Atacora	9	7	16
Atlantique	10	9	19
Borgou	8	10	18
Collines	6	6	12
Couffo	5	6	11
Donga	5	6	11
Littoral	10		10
Mono	8	3	11
Ouémé	12	7	19
Plateau	6	4	10
Zou	7	4	11
<b>Total</b>	<b>89</b>	<b>71</b>	<b>160</b>

In addition to the selected markets, points of sale and service provision locations have been identified in the localities of the sampled markets to account for all components of household consumption aggregates (food, housing, other non-food products, and services).

## 5. Data Collection

### 5.1. Organization of Field Work

#### ➤ **Household and Community Components**

The work was organized to start almost simultaneously in all strata and to finish nearly at the same time.

The data collection for the first wave took place from November 17 to December 23, 2021, and then from January 11 to January 31, 2022. It involved 192 field agents, including 48 team leaders and 144 enumerators. Ten editors, recruited for the occasion and stationed at the INStAD offices, ensured real-time quality control of the data synchronized on the dedicated server for collection.

As for the second wave, it occurred from April 20 to July 19, 2022. Ninety-six field agents, including 24 team leaders and 72 enumerators, as well as five office editors, participated in this phase.

Each data collection wave was preceded by a household enumeration in the primary units. For the first wave, enumeration took place from November 3, 2021. The second enumeration wave occurred from April 1 to April 30, 2022. The second wave faced some difficulties:

- Cluster 086 in the commune of Tanguiéta (village TCHATINGOU), Atacora department, could not be enumerated due to terrorist attacks in the area.
- Cluster 426 in the Enagnon neighborhood, Littoral department, could not be enumerated as it was partially demolished during urbanization projects in the city.

Despite these challenges, data collection from the sample households was successfully conducted. Additionally, in the context of weighting calculations, an estimation of the total number of households was made for the two clusters that were not enumerated but were surveyed, based on observed trends in the strata containing these clusters.

#### ➤ **Non-Standard Units Component (NSU)**

The supplementary data collection on non-standard units (NSU) took place from July 15 to August 17, 2021. It mobilized 63 temporary agents, including 13 team leaders and 50 enumerators. The collection focused on food products included in Section 7 of the household questionnaire, as well as agricultural products included in Section 16 of the same questionnaire.

#### ➤ **Price component**

Price surveys were conducted from December 6, 2021, to December 5, 2022. A total of 63 agents were involved, including 15 agents from the Harmonized Index of Consumer Prices (HICP) system and 46 other temporary collection agents.

The collection of prices for homogeneous varieties occurred in the sampled markets across all strata. Price surveys for heterogeneous varieties were conducted at points of sale other than markets within the same strata.

This price survey operation covered a total of 368 goods and services listed in the EHCVM2 product list.

## **5.2. Data Collection Method**

The Computer-Assisted Personal Interview (CAPI) technique using the "Survey Solutions" (SuSo) software is employed for all components of the survey.

For the household, community, and NSU components, three levels of control are implemented. Firstly, field agents conduct checks directly integrated into the data collection application. Next, team leaders review the questionnaires, ensuring the same controls, before validating and transmitting them to headquarters. Finally, the headquarters team executes a quality control and rejection program on a subset of questionnaires adopted at the regional level. In addition to this regional program, INStAD has implemented another program to identify certain unaddressed inconsistencies.

At headquarters, two options were applied: automatic rejection of the questionnaire and exchanges with the field team.

Regarding the price component, checks were conducted midway through and at the end of the data collection.

## 6. Collection results

As previously mentioned, the data was collected in two waves, with each wave covering half of the sample. Table 4 provides the distribution of the final sample of households and individuals by department for each wave.

**Table 4 :** Number of households and individuals per department in the final dataset for each stratum.

Department	Category	Wave 1			Wave 2			Total
		Urban	Rural	Total	Urban	Rural	Total	
Alibori	Households	60	180	240	72	168	240	480
	Individuals	391	123	1 621	441	1 106	1 547	3 168
Atacora	Households	108	180	288	120	168	288	576
	Individuals	731	1 041	1 772	795	1 238	2 033	3 805
Atlantique	Households	240	288	528	252	276	528	1 056
	Individuals	1 052	1 241	2 293	1 232	1 315	2 547	4 840
Borgou	Households	166	168	334	180	156	336	670
	Individuals	874	112	1 994	1 031	978	2 009	4 003
Collines	Households	96	216	312	96	204	300	612
	Individuals	396	922	1 318	625	1 358	1 983	3 301
Couffo	Households	95	216	311	96	216	312	623
	Individuals	425	882	1 307	466	1 089	1 555	2 862
Donga	Households	131	180	311	144	180	324	635
	Individuals	858	1 099	1 957	969	1 165	2 134	4 091
Littoral	Households	347	-	347	347	-	347	694
	Individuals	1 329	-	1 329	1 612	-	1 612	2 941
Mono	Households	214	192	406	204	192	396	802
	Individuals	866	757	1 623	938	850	1 788	3 411
Ouémé	Households	276	144	420	276	156	432	852
	Individuals	1 277	679	1 956	1 318	794	2 112	4 068
Plateau	Households	144	156	300	144	156	300	600
	Individuals	728	799	1 527	975	996	1 971	3 498
Zou	Households	72	144	216	72	144	216	432
	Individuals	343	799	1 142	395	866	1 261	2 403
Total	Households	1 949	2 064	4 013	2 003	2 016	4 019	8 032
	Individuals	927	10 569	19 839	10 797	11 755	22 552	42 391

Furthermore, the data collected on non-standard units allowed quantifying household consumption and agricultural production. The price surveys contributed to calculating temporal and spatial deflators

## 7. Datasets

Following the data collection, the following datasets were established:

### 7.1. Household datasets

The household datasets correspond to data collected using the household questionnaire. In principle, each section of the questionnaire corresponds to a file (in Stata format). The filenames for the datasets consist of three main parts that link the questionnaire to the Stata datasets:

- The first part of the filename refers to the questionnaire section (e.g., s00 for section 0, s01 for section 1, s16a for section 16a, etc.).
- The second part is "me," indicating that these are household data (to distinguish them from community data), and is the same for all household files.
- The third part refers to the country and the year of the survey, for example, ben2021 refers to data from Benin, the 2021 edition of the survey.

For example, the file s00\_me\_ben\_2021.dta contains data from section 0 of Benin for the 2021/22 edition of the survey.

Each database contains variables from the respective section. Variables are named with the section number and the variable number. For example, s00q01 corresponds to variable q01 in section s00.

The list of household databases is found in Appendix A1.

### Data Use and Integration

In each file, the variables "grappe" (primary sampling unit) and "menage" (household number) are used to identify the household and facilitate matching. For files with another level (individual, plot, etc.), there are one or more additional variables easily identifiable in the databases.

Similarly, the variables "grappe" and "menage" allow users to merge data from this wave with the previous wave (EHCVM1). However, users should keep in mind that only households marked as panel in the "PanelHH" variable will have valid values for merging with the previous wave.

Each member of the households included in the survey has been assigned a unique identification number, which can be used to merge information about a specific household member across different datasets. This is referred to as variable "s01q00a" in the household sociodemographic characteristics module (database s01\_me\_BEN2021). Other datasets have been harmonized to have a variable named "sXXq00a" (depending on the database being used) that refers to the respondent of the section.

### 7.2. Community datasets

Community databases correspond to the data collected using the community questionnaire. They are constructed according to the same logic. In the naming of these databases, the prefix "co" is used instead of the prefix "me". The identification variable is the cluster.

### 7.3. Auxiliary Datasets

There are four main auxiliary databases: Prices, NSU, Survey Weights, Calories. These datasets are briefly described below:

- **Prices.** The prices file is named ehcvn\_prix\_ben\_2021. This file contains variables related to the prices of products. Data are collected monthly for each stratum (region/area of residence). The main variables are as follows:
  - Region : region of the country being surveyed
  - Area of residence: Urban or rural area of residence
  - Year : year of data collection
  - Month : month of data collection
  - Week : week number within the month
  - Codpr : code of the considered product
  - Variety : variety of the product within the code (a product can have several varieties)
  - Unit : Unit of measurement
  - Weight : Weight of the product
  - Price : price of the product according to the relevant weight and unit
- **NSU.** The NSU consumption file is titled ehcvn\_NSU\_ben\_2021. This file contains variables related to conversion factors between non-standard and standard units. The data were collected in 2018 and supplemented in 2021. The main variables are:
  - Region : region of the country being surveyed
  - Area of residence: Urban or rural area of residence
  - Codpr : code of the considered product
  - Unit : Unit of measurement
  - Size : Size of the considered
  - Weight : Weight of the product
- **Survey Weights** The weights file is named ehcvn\_ponderations\_[country]2021. Weights are calculated for each household, taking into account the panel dimension. The variables are as follows:
  - Cluster : primary sampling unit
  - Household : household number within the cluster
  - hhweight : Household weight
- **Calories.** The file is titled calorie\_conversion\_WA\_2021. This file allows the conversion to calories for 100 grams of product for West Africa (WA). The variables are as follows:
  - Codpr : code of the considered product
  - Refuse: percentage of waste in the product
  - Cal : calorie value of 100 grams of product

The household, community, and auxiliary datasets are in a directory (e.g., "datain") with different subdirectories. The analysis databases, which are described below, are in another directory (e.g., "dataout").

### 7.4. Analysis Datasets

Four main datasets are created for poverty analysis and other studies: an individual dataset, a household dataset, a consumption dataset, and a dataset for calculating poverty indicators and other analytical work. The do-files used to create these datasets are archived and accompany these files. The databases are described below.

- **Individual :** The individual file is titled ehcvu\_individu\_ben\_2021. This file contains variables created for analytical work, either using a single collected variable or by combining several variables. Since these are analytical variables, imputations may be made on the initial variables.
  - country : Country
  - year : Year of the survey
  - hhid : Household identifier
  - grappe : Cluster number
  - menage : Household number
  - panel : Panel
  - numind : Individual number
  - vague : Wave
  - zae : Agroecological zone
  - zaemil : Group (zae environment)
  - region : Region of residence
  - departement : Department of residence
  - sp\_commune : Commune of residence
  - milieu : Area of residence (urban or rural)
  - hhweight : Household weight
  - resid : Resident
  - sexe : Gender
  - age : Age in years
  - lien : Relationship
  - mstat : Marital Status
  - religion : Religion
  - ethnie : Ethnicity
  - nation : Nationality
  - agemar : Age at first marriage
  - mal30j : Health problem in the last 30 days
  - aff30j : Health problem
  - arrmal : Activity interruption due to illness
  - durarr : Duration of activity interruption due to illness
  - con30j : Consultation in the last 30 days
  - hos12m : Hospitalization in the last 12 months
  - couvmal : Health coverage
  - moustiq : Slept under a mosquito net last night
  - handit : Any level of disability
  - handig : Major disability only
  - alfa : Literacy (read/write)
  - alfa2 : Literacy (read/write/understand)
  - scol : School attendance 2020/2021
  - educ\_scol : Current educational level
  - educ\_hi : Highest educational level completed
  - diplome : Highest diploma
  - telpor : Has a mobile phone

- internet : Has internet access
  - activ7j : Activity status in the last 7 days
  - activ12m : Activity status in the last 12 months
  - branch : Activity branch
  - sectins : Institutional sector of primary employment
  - csp : Socio-professional category of main employment
  - volhor : Annual working hours in main employment
  - salaire : Annual salary from main employment
  - emploi\_sec : Has a secondary job in the last 12 months
  - sectins\_sec : Institutional sector of secondary employment
  - csp\_sec : Socio-professional category of secondary employment
  - volhor\_sec : Annual working hours in secondary employment
  - salaire\_sec : Annual salary from secondary employment
  - bank : Has a bank account or similar
  - serviceconsult : Health service consulted
  - persconsult : Health personnel consulted
- **Household:** The household file is titled ehcv\_menage\_ben2021. This file contains variables created for analytical work. Some household-level variables are created similarly to the individual file. Other variables relate to the household head and are drawn from the previous file.
    - country: Country
    - hhid: Household identifier
    - grappe: Cluster
    - menage: Household number within the cluster
    - vague: Wave
    - logem: Housing occupancy
    - mur: Wall made of permanent materials
    - toit: Roof made of permanent materials
    - sol: Floor made of permanent materials
    - eauboi\_ss: Drinking water in the dry season
    - eauboi\_sp: Drinking water in the rainy season
    - elec\_ac: Access to the electrical grid
    - elec\_ur: Uses electricity from the grid
    - elec\_ua: Uses solar/generator electricity
    - ordure: Sanitary waste disposal
    - toilet: Sanitary toilets
    - eva\_toi: Sanitary excrement disposal
    - eva\_eau: Sanitary wastewater disposal
    - year: Year
    - tv: Household has a TV
    - fer: Household has an electric iron
    - frigo: Household has a refrigerator/freezer
    - cuisin: Household has an electric/gas stove
    - ordin: Household has a computer
    - decod: Household has a decoder/antenna
    - car: Household has a car
    - super: Agricultural area
    - grosrum: Number of large ruminants
    - petitrum: Number of small ruminants



- porc: Number of pigs
- lapin: Number of rabbits
- volail: Number of poultry
- sh\_id\_demo: Demographic shock
- sh\_co\_natu: Natural covariant shock
- sh\_co\_eco: Economic covariant shock
- sh\_id\_eco: Economic idiosyncratic shock
- sh\_co\_vio: Violence covariant shock
- sh\_co\_oth: Other shocks

**Consumption:** The consumption file is titled ehcv\_m\_conso\_ben\_2021. The main variable in this file is annual consumption per product and acquisition mode.

- grappe: Primary sampling unit
- menage: Household number within the cluster
- codpr: Product code being surveyed
- modep: Mode of acquisition (purchase, self-consumption, gift received, imputed rent, durable goods usage value)
- Depan: Annual expenditure

**Poverty:** The welfare file is titled ehcv\_m\_welfare\_ben\_2021. This file contains variables for calculating poverty indicators and conducting other analytical work.

- grappe: Primary sampling unit
- menage: Household number within the cluster
- region: Region of the country being surveyed
- milieu: Residential environment
- hhweight: Household weight
- hhsiz: Household size
- pcexp: Welfare indicator
- zref: National poverty line
- hhid: Household identifier
- vague: Wave
- zae: Agroecological zone
- eqadu1: Number of adult equivalents (FAO method)
- eqadu2: Number of adult equivalents (alternative method)
- hgender: Gender of the household head
- hage: Age of the household head
- hmstat: Marital status of the household head
- hreligion: Religion of the household head
- hnation: Nationality of the household head
- hethnie: Ethnicity of the household head
- halfa: Literacy (read/write) of the household head
- halfa2: Literacy (read/write/understand) of the household head
- heduc: Education level of the household head
- hdiploma: Highest diploma of the household head
- hhandig: Major disability of the household head
- hactiv7j: Activity status of the household head in the last 7 days
- hactiv12m: Activity status of the household head in the last 12 months
- hbranch: Activity branch of the household head
- hsectins: Institutional sector of the household head
- hcsp: Socio-professional category of the household head

- dali: Annual food consumption of the household
- dnal: Annual non-food consumption of the household
- dtot: Total annual consumption of the household
- pcexp: Welfare indicator
- def\_spa: Spatial deflator
- def\_temp: Temporal deflator

## APPENDIX

**Table a1 : Listing of household datasets and their descriptions**

Questionnaire	Dataset name	Description
Section 0	s00_me_ben_2021	Household identification
Section 1	s01_me_ben_2021	Socio-demographic characteristics of household members
Section 2	s02_me_ben_2021	Education of household members aged 3 and above
Section 3	s03_me_ben_2021	Health of household members
Section 4	s04a_me_ben_2021	Employment status of household members aged 5 and above
	s04b_me_ben_2021	Primary employment of household members aged 5 and above
	s04c_me_ben_2021	Secondary employment of household members aged 5 and above
Section 5	s05_me_ben_2021	Non-employment income of household members aged 15 and above
Section 6	s06_me_ben_2021	Savings and credit of household members aged 15 and above
Section 7	s07a_1_me_ben_2021	Meals taken outside the household by each household member
	s07a_2_me_ben_2021	Meals taken together outside the household by at least two household members
	s07b_me_ben_2021	Food consumption over the past 7 days
Section 8	s08a_me_ben_2021	Food security according to the FAO's FIES approach
Section 9	s09a_me_ben_2021	Expenditures on holidays and ceremonies over the past 12 months
	s09b_me_ben_2021	Non-food expenditures over the past 7 days
	s09c_me_ben_2021	Non-food expenditures over the past 30 days
	s09d_me_ben_2021	Non-food expenditures over the past 3 months
	s09e_me_ben_2021	Non-food expenditures over the past 6 months
	s09f_me_ben_2021	Non-food expenditures over the past 12 months
Section 10	s10a_me_ben_2021	Existence of a non-agricultural business
	s10b_me_ben_2021	Characteristics of non-agricultural businesses
Section 11	s11_me_ben_2021	Housing characteristics
Section 12	s12_me_ben_2021	Household assets
Section 13	s13_1_me_ben_2021	Identification of households that received at least one transfer
	s13_2_me_ben_2021	Transfers received by the household
Section 14	s14a_me_ben_2021	Covid-19 and its impact on households
	s14b_me_ben_2021	Other shocks and survival strategies
Section 15	s15_me_ben_2021	Safety nets
Section 16	s16a_me_ben_2021	Fields and plots
	s16b_me_ben_2021	Cost of inputs
	s16c_me_ben_2021	Crops

Questionnaire	Dataset name	Description
	s16d_me_ben_2021	Use of production
Section 17	s17_me_ben_2021	Livestock
Section 18	s18_1_me_ben_2021	Identification and characteristics of households engaged in fishing
	s18_2_me_ben_2021	Permit or license (s18q07&08)
	s18_3_me_ben_2021	Household employees outside the household
Section 19	s19_me_ben_2021	Agricultural equipment
Section 20	s20a_me_ben_2021	Subjective poverty
	s20b_1_me_ben_2021	Democratic governance
	s20b_2_me_ben_2021	Democratic governance: Characteristics of democracy (S20q02)
	s20b_3_me_ben_2021	Democratic governance: Discrimination (S20q05)
	s20c_me_ben_2021	Peace and security