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METHODOLOGICAL GUIDE FOR DATA COLLECTION ON INFORMAL CROSS-BORDER TRADE IN ECOWAS MEMBER STATES

May 2026

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ACRONYMS AND ABBREVIATIONS

CIF	Cost Insurance and Freight
SADC	Southern African Development Community
ECOWAS	Economic Community of West African States
ICBT	Informal Cross-Border Trade
DRS	Directorate of Research and Statistics
EURO	EURO zone
FOB	Free on Board
FCFA	African Financial Community Franc
IMF	International Monetary Fund
NSO	National Statistics Office
WTO	World Trade Organisation
GDP	Gross Domestic Product
IMTS	International Merchandise Trade Statistics
ETLS	ECOWAS Trade Liberalisation Scheme
CET	Common External Tariff
UEMOA	West African Economic and Monetary Union
AfCFTA	African Continental Free Trade Area

FOREWORD

The Methodological Guide on Informal Cross-Border Trade (ICBT) Data Collection in the ECOWAS Region is developed to provide Member States with a harmonised framework for collecting, compiling, and disseminating statistics on informal trade flows. Recognising that a considerable proportion of intra-regional trade occurs outside formal customs channels, the Guide seeks to fill a critical gap in the statistical landscape by standardising the concepts, definitions, and methodologies used across the region.

The Guide builds on the Informal Trade Regulatory Support Programme (ITRSP) of 2012, the subsequent ECOWAS tools for ICBT monitoring, and the continental methodology adopted by the African Union within the framework of the AfCFTA. It emphasises the importance of ICBT data in improving the accuracy of trade statistics, ensuring comparability across Member States, and providing the evidence base needed for effective policy formulation, trade negotiations, and regional integration. The Guide is structured into five (5) chapters:

Chapter One deals with the status of ICBT data collection in ECOWAS Member States. Chapter Two bothers on comprehensive presentation of concepts and providing definitions of technical terms which form a useful framework in this Guide. Chapter Three explains informal cross-border trade actors, the scope of informal cross-border trade as well as data collection tools. Chapter Four provides detailed guidance on data collection and compilation. Chapter Five outlines the procedures for data validation, integration and dissemination.

Additionally, the Guide includes practical tools such as questionnaire, profiling sheet, and techniques for estimating missing data. These procedures should allow Member States to produce high-quality, reliable, and timely ICBT statistics that represent the true magnitude of both national and regional trade performances.

Ultimately, the Guide supports ECOWAS' broader objectives of enhancing regional trade, strengthening the negotiation, monitoring and implementing the AfCFTA. This would ensure that policymakers have access to the full information of trade—both formal and informal. The adoption of the Guide, will unlock the potential of ICBT statistics in promoting economic growth, industrialisation, and sustainable development across ECOWAS region.

Signed,

Commissioner for Economic Affairs and Agriculture

ECOWAS Commission

May 6, 2026

INTRODUCTION

0.1 External trade statistics are essential to inform the management of economic and trade policies of a continent, a region or even a country.

0.2 Global trade expanded by an estimated 300 billion US Dollars in the first half of 2025, growing at an estimated 1.5 percent in the first quarter. [1]

0.3 Africa's total merchandise trade gathered momentum, recovering strongly by 13.9 percent to about 1,500 billion US Dollars in 2024, from a contraction of 5.4 percent in 2023. However, Africa still accounts for only 3.3 percent of global exports. In 2025, African trade was undergoing a transformation, focused on the implementation of the AfCFTA, which aims to boost intra-African trade, stimulate industrialisation, and improve the continent's competitiveness. Technological advances, particularly in e-commerce, are transforming logistics and access to goods, despite the ongoing challenges such as the need to remove customs barriers and develop policies to fully realise the AfCFTA's potential [2].

0.4 The indicators produced are of great importance for political decision-making. Notwithstanding, the numerous provisions concerning trade promotion in the revised Treaty and existing initiatives such as the ECOWAS Trade Liberalisation System (ETLS), the Common External Tariff (CET), and the Protocol on the Free Movement of Goods and Persons, intra-regional trade within ECOWAS remains low (12% on average according to official statistics in 2019[3]).

0.5 Several studies have shown that the officially reported level of intra-regional trade does not reflect reality. Indeed, informal cross-border trade, which escapes customs

[1]Global Trade Update (July 2025): Global trade endures policy changes and geoeconomic risks | UN Trade and Development (UNCTAD).

[2]https://media.afreximbank.com/afrexim/African-Trade-Report_2025.pdf

[3]Concept Note for the Regional Workshop on the ECOWAS Program to Support the Regulation of Informal Economy (PARCI/ITRSP)

registration, constitutes a significant portion of external trade. According to these studies, its share represents more than 20% of intra-regional trade.

0.6 The goods traded at the various border crossings vary according to the agricultural seasons, and not all ECOWAS countries have permanent mechanisms for monitoring this informal trade.

0.7 To address the lack of permanent mechanism for monitoring informal trade and ensure better coverage of external trade statistics, the ECOWAS Commission, through the Directorate of Research and Statistics (DRS), has planned the development of a methodological guide for collecting data on the ICBT for the benefit of Member States.

0.8 This Guide is developed to outline a methodological approach for producing statistics on Informal Cross-Border Trade (ICBT) for ECOWAS Member States. It provides guidance on conducting ICBT data collections at the borders of ECOWAS Member States or other designated locations (such as points of loading or off-loading). Additionally, it helps to measure the contribution of ICBT to overall International Merchandise Trade Statistics (IMTS).

0.9 This Guide will take into account best practices in the collection of ICBT data currently being implemented in other countries or regions. It will also propose the main indicators that should be produced by all Member States.

0.10 Finally, it will help Member States to harmonise the institutional framework, metadata, publication, dissemination, and other aspects that will allow for comparable statistics to be obtained across all ECOWAS Member States.

0.11 The main objective of the Guide is to provide ECOWAS Member States with a harmonised methodology for collecting, compiling, and analysing data on Informal Cross-Border Trade (ICBT) statistics.

0.12 The specific objectives are to:

a) Determine the scope of ICBT;
b) Identify the preparatory steps for data collection on ICBT;
c) Propose ICBT data collection techniques ;

d) Present an uprating/extrapolating technique for estimating ICBT data; and

e) Provide a technique for integrating ICBT data with the formal trade data.

CHAPTER I: STATUS OF ICBT DATA COLLECTION IN ECOWAS MEMBER STATES

I.1. Benin

1.1 Benin conducted four surveys on unregistered foreign trade in 2010, 2011, 2018-2019, and 2022-2023 respectively.

1.2 Data collection took place from January 21 to 27, 2010, at 150 crossing- points and from September 19 to 28, 2011, at 171 crossing-points in the first two editions.

1.3 The third edition took place in four phases as follows:

- the first in October 2018;
- the second in August 2019;
- the third in November 2019; and
- the fourth in January 2020.

1.4 The fourth edition also took place in four (4) phases.

- the first phase was held in August 2022;
- the second in October 2022;
- the third in March 2023; and
- the fourth in June 2023.

1.5 The third and fourth editions consisting of four steps respectively took place over a period of fifteen (15) days of collection.

I.2. Cabo Verde

1.6 No data collection activities have been carried out. The country has no land borders.

I.3. Cote d'Ivoire

1.7 From February 11 to March 1, 2010, Côte d'Ivoire conducted a pilot survey aimed at measuring unrecorded cross-border trade flows.

1.8 The sampling covered twenty-six (26) customs posts and twelve (12) customs brigades classified according to their importance in terms of revenue. On this basis, six (6) posts were selected, according to two main criteria:

- their level of contribution to customs revenue; and

- their geographical proximity which is set at a maximum radius of 350 km.

1.9 The objective of the pilot survey was to test the feasibility of a regular survey and to identify operational constraints.

1.10 The results obtained are as follows:

- The average duration of administration of a questionnaire per agent is estimated at twenty (20) minutes maximum;
- The average number of interviews carried out per agent varies from five (5) to ten (10) per day, depending on the cooperation of the respondents and the volume of traffic in the area covered; and
- The total number of questionnaires validly completed during the fifteen (15) days of the survey totalled 844.

1.11 These results confirm the technical feasibility of implementing a survey of unrecorded cross-border trade flows on a larger scale.

I.4. The Gambia

1.12 The Ministry of Commerce, in collaboration with the International Trade Centre, conducted an assessment in April-May 2022. The primary data collected during this assessment shed light on the phenomenon of small-scale cross-border trade in certain regions and made recommendations to facilitate trade and promote inclusive development for border communities.

I.5. Ghana

1.13 Informal Cross-Border Trade (ICBT) study was conducted by Ghana Statistical Service (GSS) from October 2024 to September 2025. It was funded by the Harmonising and Improving Statistics in West Africa (HISWA) project in collaboration with the Ghana Immigration Service (GIS) and the Customs Division of Ghana Revenue Authority (GRA).

1.14 The objective was to estimate unrecorded trade by identifying its volume, value, direction of trade as well as the commodities traded, modes of transport, trading partners, and levels of activities at each border and provide a comparative analysis of informal trade.

1.15 A total of 321 borders were identified during the border profiling exercise covering 10 of the 16 regions neighbouring Togo, Côte d'Ivoire and Burkina Faso in 2022. Consequently, a pilot test of the methodology was conducted in December 2023 in approved, unapproved and inland borders. This activity allowed for weight standardisation, development of product catalogue to ensure products and weights to be pre-filled onto the Computer Assisted Personal Interviews (CAPI) device to reduce errors during the main survey in June 2024. Also, data collection covered 168 days in a year (14 days monthly) from 6 :00a.m. to 6 :00p.m.

1.16 However, all the border points were initially covered to establish significant ICBT transactions. The associated challenge was attributed to continuity of funding due to the expiration of the HISWA project in 2025. Data collection ended in September 2025. Consequently, data processing and analysis were completed and the Report for October to December 2024 has been published. Report for January to September 2025 is yet to be published.

I.6. Guinea

1.17 As part of the Balance of Payments Statistics Improvement Project, the Central Bank of the Republic of Guinea (BCRG), in conjunction with the Directorate General of Customs and the National Institute of Statistics (INS), conducted a survey on the flow of goods across land borders throughout the country.

1.18 This survey aimed to estimate the flow of goods passing through non-computerized customs offices and posts and to update the trade balance correction coefficient. The survey covered 22 non-computerized customs offices and posts and ran from April 1, 2018, to March 30, 2019. The methodology involved distributing Detailed Declaration Forms (DDFs) to the targeted border posts for goods valued at one million Guinean francs or more, and Simplified Customs Declaration Forms (SCDFs) for goods valued at less than one million Guinean francs and for which a receipt was issued.

1.19 The survey results revealed that 1% of Guinea's non-oil imports and 3.4% of its non-mining exports pass through the non-computerized customs offices covered by the survey. The National Institute of Statistics (INS) plans to conduct a new survey on

cross-border flows in 2026 to update existing coefficients and improve the coverage of foreign trade data.

I.7. Guinea-Bissau

1.20 Only one WAEMU commissioned pilot survey was carried out in 2010.

I.8. Liberia

1.21 The Liberia Institute of Statistics and Geo-Information Services (LISGIS), with support from the Harmonizing and Improving Statistics in West Africa (HISWA) Project, conducted an Informal Cross-Border Trade (ICBT) study in December 2024.

1.22 The pilot survey aimed to measure the flow and value of unrecorded trade using digital tools, across 197 border points, working from 7:00am to 6:00pm for 26 days in November to December 2024. A purposive sampling approach was based on prior mapping exercises, local knowledge, and collaboration with the Liberia Revenue Authority, Liberia Immigration Services, and other border agencies.

1.23 The study recorded a total value of 4.11 million US Dollars where export values stood at 1.08 million US Dollars and imports at 3.03 million US Dollars. The top export product was 'meat and edible meat offal of poultry' at 0.45 million US Dollars, while the top import was 'cocoa and preparations' at 1.63 million US Dollars. Meanwhile, the data was disaggregated by sex, country of origin/destination, time, and mode of transport. The study showed that ICBT transactions with Sierra Leone stood at 53 percent, and Côte d'Ivoire at 59 percent for export and import respectively.

1.24 The main challenges were limited financial and human resources, but to expand coverage and include more ICBT points in future surveys, it is essential to strengthen logistical support and mobilize additional resources. Going forward, LISGIS plans to publish and disseminate the findings to relevant stakeholders ahead of its plan to conduct a comprehensive ICBT data collection and also to institutionalise the process.

I.9. Nigeria

1.25 The Central Bank of Nigeria (CBN) funded and conducted an Informal Cross-Border Trade (ICBT) study to estimate unrecorded trade values for Balance of Payments (BoP) compilation. Sixteen (16) border sites were selected based on the volume of trading activities. Data collection was carried out during selected weeks over a twelve-month period, June 2013 to May 2014, between 7:00a.m. and 6:00p.m. The methodology was adapted from Ackello-Ogutu (1995), Minde and Nakhum (1998).

1.26 The total value of ICBT was estimated at ₦1,090,890.58 billion, comprising ₦665.612.5 billion in imports and ₦435.278.08 billion in exports. Agricultural products constituted the largest share, accounting for 56.7 percent of the total informal trade. Niger Republic was the main trading partner, representing 75.3 percent of Nigeria's informal exports and 76.4 percent of imports. Most goods were transported via lorry (47.7 percent), other vehicles (37.7 percent), and foot (7.0 percent). Kamba border was the most active monitoring point (22.0 percent), followed by Kongolam (21.1 percent). Kamba border dominated exports, while Kongolam border led in imports.

1.27 Key challenges included insecurity at border posts, periodic border closures and difficulties in estimating quantities for mixed or assorted goods. In April 2025, the National Bureau of Statistics (NBS) signed a Memorandum of Understanding (MoU) with the Nigerian Export Promotion Council (NEPC) to implement ICBT data collection for an initial period of two years. The exercise will be conducted monthly, covering 33 border posts and 26 markets points. An Inception meeting has been held, and data collection instruments are currently being developed. The project is entering the preparatory phase, which includes the stakeholders' engagement meeting, as well as mapping and profiling exercises. The pilot study and full fieldwork will proceed upon the release of required funds.

I.10. Senegal

1.28 Senegal conducted the survey of households and traders at six border crossing-points. These crossing points were identified based on their importance in cross-border trade, in consultation with the relevant national authorities, particularly customs. The data collection phase lasted 15 days in February 2010.

1.29 In 2015, as part of the rebasing to 2014, data collection missions were carried out at customs offices that were not connected to the Automated Management of Customs Information and Trade (GAINDE) system. Data sources also came from the Directorate of Livestock, the Directorate of Horticulture, and the Directorate of Maritime Fisheries.

I.11. Sierra Leone

1.30 Statistics Sierra Leone conducted an Informal Cross-Border Trade (ICBT) survey to measure the scale, composition, and direction of unrecorded trade flows with Guinea and Liberia, with the aim of improving the coverage of International Merchandise Trade Statistics (IMTS).

1.31 The survey was based on feasibility studies carried out between 2020 and 2021 and was implemented twice; in 2024 (final results) and 2025 (draft results). Then, data were collected at 20 border points across eight (8) districts, using structured questionnaires, direct observation, and electronic data collection devices. The survey was funded under the Harmonising and Improving Statistics in West Africa (HISWA) project, supported by the Government of Sierra Leone and the World Bank Group (WBG).

1.32 The total informal trade was estimated at NLe 24.1million, with exports amounting to NLe 16.1million (66.8 percent), exceeding imports of NLe 8.0 million (33.2 percent). Guinea accounted for over 93 percent of total ICBT trade flows, while Liberia contributed about 7 percent. The main commodities traded were beverages/provisions (NLe 6.6 million) and agricultural products (NLe 6.5million). The primary modes of transport were Motorbikes (54.8 percent) and vehicles (33.9 percent).

1.33 Key challenges included limited geographical coverage, security risks, and difficulties in weighing bulk goods. Proposed measures include conducting surveys in both rainy and dry seasons, expanding coverage, institutionalising annual/biannual surveys, and strengthening coordination with border authorities. Improved integration of ICBT data is expected to enhance the accuracy of GDP and Balance of Payments estimates.

I.12. Togo

1.34 Togo, like other WAEMU countries, conducted a pilot survey on unrecorded cross-border trade flows from January 31 to February 14, 2010. In 2019, two data collection rounds on unrecorded cross-border trade flows were carried out, with two visits in March and December, each lasting 15 days.

1.35 As part of the new national accounts rebasing process, the National Institute of Statistics and Economic and Demographic Studies (INSEED) of Togo implemented a series of statistical operations, including a new survey on unrecorded cross-border trade flows (EFTNE-II). The development of the data collection tools (methodological document, CAPI questionnaire, and enumerator's guide) is complete. Their development was carried out by the rebasing technical team. Four one –month visits will be conducted per quarter, starting in the last quarter of 2025, covering an average of 100 border crossing-points.

1.36 Chapter II, which follows, will examine the concepts and definitions involved in the preparation of this Methodological Guide in order to provide a clearer understanding of international merchandise trade statistics.

CHAPTER II: CONCEPTS AND DEFINITIONS

II.1. External trade (Goods)

The external trade of a country describes the movement of goods between the economic territory of the country and the rest of the world, with the exception of flows of excluded goods. Goods should be defined based on the Manual on International Merchandise Trade Statistics (IMTS, 2010).[4]

II.2. Informal Cross-Border Trade

It refers to transactions of goods and services between two or more countries that are not recorded in official registers and are therefore not included in official trade statistics. Goods and services must be defined in accordance with the Manual on International Merchandise Trade Statistics (IMTS) and the Manual on Statistics of International Trade in Services (MSTIS).

II.3. Merchandise

Merchandise (Goods) are defined as physical, produced objects for which a demand exists, over which ownership rights can be established and whose ownership can be transferred from one institutional unit to another by engaging in transactions on markets, plus certain types of so-called knowledge-capturing products stored on physical media that can cross borders physically (IMTS, 2010).

II.4. Economic territory

The economic territory of a country is the geographical area under the jurisdiction of a government and within which people, goods, and capital circulate freely. In other words, the economic territory of a country is its geographical territory from which internal enclaves (embassies, foreign diplomatic representations) are excluded and to

4International Merchandise Trade Statistics 2010, Paragraphs 1.41 to 1.60

which external enclaves (embassies, diplomatic representations of the State in other countries) are included.

II.5. Imports

Importation is the act of bringing in any kind of merchandise into an economic territory. Imports are defined as goods which add to the stock of material resources of the compiling economy by entering its economic territory (IMTS 2010). They are valued at Cost, Insurance and Freight (CIF) prices, which includes the transaction value of the goods plus the value of insurance and freight services necessary to deliver the goods from the border of the exporting country to the border of the importing country.

II.6. Informal imports

Informal imports are merchandise flows entering the economic territory of a country through surveyed border points from a partner country, which are not recorded in any official register.

II.7. Exports

Exportation is the act of taking out any kind of merchandise from an economic territory. It includes both shipments of domestic and foreign products taken from the economic territory. Exports are defined as goods which subtract to the stock of material resources of the compiling economy by leaving its economic territory (IMTS, 2010). They should be valued on a Free on Board (FoB), which includes the transaction value of the goods and the value of the services provided to deliver the goods to the border of the exporting country.

II.8. Informal exports

Informal exports are merchandise flows leaving the economic territory of a country through surveyed border points to a partner country, which are not recorded in any official register.

II.9. Partner Country

Partner country is the country of shipment and destination of the goods.

II.10. Country of shipment

This is the country where the goods are shipped directly to the importing country.

II.11. Country of destination

This refers to the country into which the goods are shipped

II.12. Gross weight

The gross weight is the weight of the goods including packaging.

II.13. Net weight

The net weight is the weight of the goods without packaging.

II.14. Quantity

This is a stock measure expressed in number of units.

II.15. Unit of measurement

Unit in which each quantity is declared.

II.16. Packaging

Packaging is considered to be any external or internal container (crate, box, or carton), any support and envelope, excluding transport equipment (containers, tarpaulins, lifting devices, etc.), and equipment for related transport equipment.

II.17. Crossing point

A crossing point is defined as any portion of the national territory (land or water) serving as an exit/entry point for exporters/importers of products.

II.18. Corridor

This is an area along and from which economic activity zones will develop, drawing their dynamism from the considerable increase in road transport capacity and the improvement of traffic flows and exchanges of people and goods. Corridor establishes relationships between various actors of production and consumption areas located in one or more countries, in accordance with different market categories (collection, grouping, semi-wholesale, etc.).

II.19. Road harassment

This refers to the inconveniences or difficulties linked to practices that hinder the free movement of goods and people.

II.20. Smuggling

Smuggling is the act of secretly and illegally moving goods into or out of a country.

For statistical purposes, smuggling is divided into two categories:

- Smuggling of legal goods for the purpose of tax evasion or to defy an imposed ban. These transactions are part of ICBT;
- Smuggling of illegal goods (e.g., firearms, narcotics, counterfeit and pirated products, organ trafficking, illegal wildlife trade, etc.). These are neither part of formal trade nor the ICBT.

II.21. Fraud

Fraud is any act by which a person misleads or attempts to mislead customs and thereby evades, or attempts to evade, in whole or in part, the payment of duties and taxes or the application of prohibitions or restrictions provided for by customs legislation or obtains, or attempts to obtain, an advantage contrary to customs legislation, thereby committing a customs offence.

II.22. Transit

This is the situation in which a commodity passes through a country into another without staying in the transit country.

2.1 In the following Chapter III, we will outline the key players and data collection methods to provide a better understanding of the mechanisms of cross-border informal trade.

CHAPTER III: INFORMAL CROSS-BORDER TRADE ACTORS, SCOPE AND DATA COLLECTION TOOLS

III.1. Actors

3.1 ICBT actors are of two levels; direct and indirect actors. Direct actors are those who intervene directly in the marketing chain. These are producers (farmers, livestock breeders, etc.), cross-border traders, and drivers or transporters of goods. While Indirect actors are public market management authorities, customs service agents, police/mobile-police officers, phytosanitary/forestry control officers, and other agents involved in the control or regulation (security agents) or in the facilitation of cross-border trade.

3.2 The authority-in-charge ensures overall coordination and supervision of the planning, design, and implementation of ICBT data collection activities, in strict accordance with the regional ICBT methodology.

3.3 National Statistics Offices (NSOs) are mandated to discharge this role. However, each Member State of the Community may freely determine the appropriate body or institution mandated to carry out ICBT data collection under its national legislation.

3.4 Furthermore, the authority-in-charge should establish a technical working group comprising all relevant institutions involved in the production and dissemination of international merchandise trade statistics within the Member States.

3.5 The Working group may include National Statistics Office, Central Bank, Customs authority, the Ministries in charge of trade, agriculture and livestock, etc.

III.2. Scope of Data Collection

3.6 The scope of this data collection methodology is limited to all traded goods.

3.7 The data collection operation covers the entire territory. It will involve simultaneously collecting information on unregistered trade, commercial channels, and related transport activities. It will track the movement of goods at the borders and from the loading and off-loading points. All vehicles, without exception, will be included, regardless of their place of registration.

III.3. Data Collection Tools

3.8 The ICBT main data collection tools are:

- pre-designed questionnaires;
- field instruction manuals;
- scales;
- lists of units of measurement and conversion factors; and
- the list of product categories.

III.3.1. Pre-designed questionnaires

3.9 They allow for the recording of transactions observed at points of entry, whether on paper such as brochures or counter books, or electronically on tablets.

3.10 The structure of the questionnaire used for data collection must, at a minimum, include the following elements:

- Date of collection;
- Name of the collection point;
- Trade flow;
- Product name;
- Commonly used/commercial description of the product;
- HS codes;
- Quantity of product (weight, unit, etc.);
- Unit of measure of the product;
- Country of shipment;
- Country of destination;
- Means of transport;
- Price per unit of measure;
- Value of goods;
- Currency of the recorded transaction;
- Exchange rate;

- Respondent’s sex;
- Respondent’s age;
- Incidental costs;
- Actors' motivations.

III.3.2. Field instruction manuals

3.11 They are designed to provide guidance to data collectors during training and the data collection phase.

III.3.3. Scales

3.12 They are used to determine the weight of transported goods. Each border crossing point must be equipped with at least one scale.

III.3.4. Lists of units of measure and conversion factors

3.13 They are used by data collectors to estimate the weights of goods to be recorded.

III.3.5. List of categories of goods

3.14 It comprises all goods identified during the profiling of borders and loading/off-loading sites prior to the start of data collection. This list should be updated as needed.

3.15 The variables primarily observed in the field are the value, quantity, and price of a traded commodity. However, when the value becomes difficult to obtain, the interviewer should at least attempt to capture the quantity of goods.

3.16 In specific cases, for example, when recording data on livestock, the size of the animal (i.e. small, medium, or large) should be indicated in the product description as prices may vary according to size.

3.17 Chapter IV deals with data collection and compilation, including the methodology for collecting statistical data on informal cross-border trade.

CHAPTER IV: DATA COLLECTION AND COMPILATION

IV.1. Identification and Updating of Border Crossing Points

4.1 The phase of identification and updating of border crossing points is a crucial step for ICBT data collection. Identifying these geographical areas allows for the listing of crossing points bordering the country through which informal trade actors bring goods in or out of the country without completing administrative and customs formalities.

4.2 In addition to geo-locating crossing points, it is necessary to produce an inventory of the main products by crossing points and the frequency of goods flow. The questionnaire designed for this purpose is presented in Appendix 3. Similarly, loading and off-loading sites where collection should take place to cover the majority of products will be identified.

4.3 The crossing point inventory should be updated at least every three (3) years.

IV.2. Sampling of Crossing Points

4.4 Given the difficulty in covering all the border crossing points during ICBT data collection, sampling is carried out to obtain a manageable and representative number of points to be monitored in each Member State. The selection of crossing points is based on the following criteria:

- the frequency of the flow of informal cross-border trade;
- the availability of necessary infrastructure such as communications, transport links, and social facilities; and
- the existence of supporting government institutions such as immigration offices, customs offices, and security services.

4.5 Where it is not feasible to cover all the identified border posts and loading/off-loading sites in a Member State, sampling methods may be applied to identify a manageable and representative number of sites to monitor.

4.6 In any event, the choice of border posts and loading and off-loading sites must meet minimum security requirements for collection agents.

IV.3. Recruitment and Training of Personnel

4.7 For data collection in the field, the number of data collectors depends closely on the number of collection points in the sample.

4.8 Training must be provided for field personnel for ease of understanding the scope of the ICBT.

IV.4. Data Collection

IV.4.1. Collection Period

4.9 Data collection on the ICBT should take place every day of the year. However, given constraints, particularly budgetary ones, this collection could ideally take place at least seven (7) days per month or fifteen (15) days per quarter. The selection of the specific week(s) in each month should take into account the variability of trade flows throughout the month. For a given month, starting mid-week, appropriate adjustments should be made to ensure seven days of data collection.

4.10 At border crossings, data will be collected daily from 7:00a.m. to 6:00p.m. However, when there are indications of significant informal cross-border trade flows beyond the aforementioned hours, a decision may be made to extend the collection period, not exceeding one hour in either case.

4.11 At wholesale or semi-wholesale markets (loading/off-loading sites), data collection can be carried out daily for markets that operate every day. For markets that are only active on market days, data collection will only take place on market days. Regardless of the day, data collection should ideally be carried out between 7:00a.m. and 6:00p.m.

IV.4.2. Techniques of data collection

4.12 Data collection for ICBT should be carried out by field personnel who are adequately trained.

IV.4.2.1. Direct observation and measurement

4.13 This technique involves structured observation of an activity, behaviour, relationship, phenomenon, network, or process at the crossing points without necessarily depending on the willingness and ability of the traders to respond to questions.

4.14 The field personnel applying this technique should be strategically placed at loading/off-loading sites and border-crossing points to record all informal goods entering or leaving the Member State that are not recorded by administrative and customs authorities.

4.15 The field personnel should observe, assess, and record the type and quantity of goods being traded informally as well as all the other variables by using the questionnaires, which can either be in hard copy and/or in soft copy form as contained in tablets.

IV.4.2.2. Interview

4.16 Field Personnel should conduct individual or group interviews with traders and other relevant personnel, particularly when it is necessary to carry out further checks and clarifications on the goods traded or to obtain additional information.

IV.4.2.3. Stock taking

4.17 This technique should only be used at loading and off-loading sites (particularly at open markets) along border areas where goods entering or exiting a Member State are gathered or stored.

4.18 Data collectors should be positioned so as to avoid double counting on border markets on market days.

IV.4.2.4. Emerging Technologies

4.19 At border crossings with well-established infrastructure, such as reliable power supply and offices for border agencies, data collectors can leverage emerging technologies to supplement border observation. These technologies include video surveillance (surveillance cameras and drones) and remote sensing.

IV.4.2.5. Periodic Qualitative Surveys

4.20 Periodic qualitative surveys, such as mixed household and business surveys, should be conducted periodically to complement the quantitative data collected by the ICBT.

IV.5. Data Compilation

IV.5.1. Data Processing

4.21 After collection, coding of goods is essential for data processing. The ICBT data must be in the Harmonized Commodity Description and Coding System (HS) Level 10 format to allow for harmonization with official trade statistics.

IV.5.1.1. Goods Included in ICBT Data Collection

4.22 The following goods must be recorded and included in the ICBT data:

- goods leaving or entering the country transported on foot, bicycles, carts, motorcycles, vehicles, wheelchairs, animals, boats, or other means of transport, in large and small quantities, that are not registered by administrative and customs authorities;
- goods loaded or off-loaded at loading/off-loading points or markets that are destined for neighbouring countries.

IV.5.1.2. Goods Excluded from ICBT Data Collection

4.23 The following goods should be excluded from informal cross-border trade:

- Goods for which a customs declaration has been made;
- Goods in transit.

IV.5.2. Transaction Valuation

4.24 In terms of currency conversion, in accordance with the IMTS Manual;

- Where the conversion of currency is necessary for the determination of the customs value, the rate of exchange to be used shall be that duly published by the competent authorities of the country of importation concerned. This rate shall reflect as

effectively as possible, in respect of the period covered by each such document of publication, the current value of such currency in commercial transactions in terms of the currency of the country of importation;

- The conversion rate to be used shall be that in effect at the time of exportation or the time of importation, as provided by each Member State.

4.25 However, it is recommended that the informal market exchange rate be used. This recommendation is made because those involved in this trade do not exchange currency through banks and formal institutions.

IV.5.3. Data Estimation

4.26 This step of the operation consists of reporting the data collected at a specific point of entry over a one-year period based on the results obtained. This will be done using information on the number of transactions per day, the number of days of activity per month, the volume of goods transactions per month, and prices.

4.27 Several estimation scenarios are possible:[5]

IV.5.3.1. Estimation of missing data for missing days within the collection week

4.28 When data collection lasts for one week within the month, the missing days will be estimated by considering the data for the same day of the previous month.

IV.5.3.2. Estimation of missing data for un-surveyed weeks within a month

4.29 Estimation models should be used to generate monthly estimates for the un-surveyed weeks of the month, based on the ICBT data collected during the same month.

IV.5.3.3. Estimation of missing data for untracked months

4.30 When ICBT flows are not recorded for one or more months, due to logistical constraints or other factors, linear interpolation and extrapolation methods can be used to estimate monthly ICBT trade flows for the un-surveyed months.

[5] Details of this model are in Appendix 1

4.31 The Bayesian imputation method which is more reliable and rigorous than linear interpolation and extrapolation methods can also be used. Although multiple imputations can be used within or outside the sample. The most common and feasible method is to use an imputation method within the sample. Multiple imputation requires the combination of two data sets.

IV.5.4. Data Extrapolation

4.32 Extrapolation is performed from the survey sample data to all border crossing points obtained during profiling.

4.33 Chapter V below provides information on the process of validating, integrating and disseminating statistical data on cross-border international trade.

CHAPTER V: DATA VALIDATION, INTEGRATION AND DISSEMINATION

V.1. Data Validation

5.1. To ensure data quality and validation:

- Data collectors should be well-trained to collect ICBT data;
- Random spot checks should be conducted by the monitoring team to ensure that the data collectors correctly apply their training during the ICBT data collection;
- ICBT data collection exercises should be conducted on one side of the border to avoid double-counting. In other words, field personnel who record both import and export ICBT data should be located on the side of the country conducting the survey;
- Applications and software installed on tablets for ICBT data collection should incorporate consistency checks and validation rules to minimise data collection errors; and
- Data should be validated at different levels of data validation processes to ensure accuracy and consistency.

V.2. Data Integration

5.2. The integration of ICBT data with official statistics should be carried out in line with the compilation frequency of administrative and customs data on international merchandise trade.

5.3. Data from the ICBT survey should be structured according to the EUROTRACE database. Uploading the data can therefore require the creation of certain specific fields in the database.

V.3. Data Dissemination

5.4. The frequency of ICBT reports at the national level are expected to align with that of regional trade reports. Consequently, ICBT data are expected to be disseminated in accordance with standard data dissemination deadlines.

CONCLUSION

Given the importance of trade between the various ECOWAS Member States, it was necessary to establish a data collection methodology. This methodology is proposed to enable each Member State to conduct its own data collection. Therefore, each Member State is encouraged to implement the methodology described in the Guide.

APPENDICES

APPENDIX 1: METHODS FOR ESTIMATING MISSING PERIODS

From the data gathered during the collection, the following tables are proposed for data extrapolation.

Table 1: Variables essential for annual extrapolation

Variable labels	Nature	Variable type	Notation
Product value (monetary value)	Quantitative		V
Net weight of the product	Quantitative		Q
Periodicity of product transactions	Qualitative	• Day (d) • Week (w) • Month (m) • Quarter (q) • Semester (Half Year) (s) • Year (y)	Pt
Number of periods in a year • Year (y) • Semester (Half Year) (s) • Quarter (q) • Month (m) • Week (w) • Day (d)	Quantitative	• 1 • 2 • 4 • 12 • 52 • 360	Np
Number of transactions made during a period for a product	Quantitative	Positive natural numbers	Nt

Let **$Va_{(i)}$:** the annual value of product i, we have: $Va_{(i)} = V_{(i)} * Np[Pt_{(i)}] * Nt_{(i)}$

Let **$Qa_{(i)}$:** the annual net weight of product i, we have: $Qa_{(i)} = Q_{(i)} * Np[Pt_{(i)}] * Nt_{(i)}$

Table 2: Formulae according to the periodicity of the transaction

Periodicity of the transaction	Annual value (Av)	Annual net weight (Qa)
Day	V*360*Nt	Q*360*Nt
Week	V*52*Nt	Q*52*Nt
Month	V*12*Nt	Q*12*Nt
Quarter	V*4*Nt	Q*4*Nt
Semester / Half year	V*2*Nt	Q*2*Nt
Year	V*Nt	Q*Nt

Direct calculation has some limitations as follows:

- It does not take into account the seasonality of certain products such as agricultural products and children's toys;
- Implicitly, it assumes that the product is traded as the case may be during all four (4) quarters or half-year (2) of the year; and
- It does not take into account price changes during the year.

To understand seasonality through the frequency of transactions (Rt) during the months of the year, we assume:

- Rt=1 when the product is traded during a given month; and
- Rt=0 when the product is not traded during a given month.

Table 3: Collection Frequency

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	August	Sep	Oct	Nov	Dec
Frequency												

NB: Months coloured in blue are periods of data collection, while months coloured in orange are periods where estimates will be applied.

Transaction rates can be associated with seasonality coefficients (SC) determined from formal data relating to the products concerned.

$$\text{Seasonality Coefficients (SC)} = \frac{Number\ of\ times}{Number\ of\ occurence}$$

Therefore, transaction rates will:

- bring the base of the extrapolation back to the month;

- use the price observed in the field for the month in which the survey is carried out;
- use reference prices such as Average Unit Value (Vum) for other months;
- add the monthly values obtained to obtain the quarterly, half-yearly, and annual values.

To bring the base of the extrapolation back to the month, the collection periodicity should be taken into account. For daily and weekly periodicity, the size of the transaction should be multiplied by the number of days/weeks in the month. For quarterly, half-yearly, and annual periodicity, the number of months of presence (Mp).

The table below summarises the methods to bring the base of the extrapolation back to the month according to the periodicities.

Table 4: Method to bring the base of extrapolation back to the month for a product

Periodicity	Monthly estimate	Value for the month of the survey	Value for the month of the survey[6]	Net weight for the month of the survey
Day	Multiplication of the transaction value (Vt) by the number of transactions per day (Nt) by the number of days in the month (Nj)	Vt*Nt*Nj	Q*Vum*Nt*Nj	Q*Nt*Nj
Week	Multiplication of the transaction size by the number of transactions per week by the number of weeks in the month, i.e., 52/12 or 4.3333.	Vt*Nt*52/12	Q*Vum*Nt*52/12	Q*Nt*52/12
Month	Multiplication of the transaction value by the number of transactions per month	Vt*Nt	Q*Vum*Nt	Q*Nt
Quarter	Division of the multiplication of the transaction value and number of transactions per quarter by the number of months of presence during the quarter	Vt*Nt/Mp[Pt]	Q*Vum *Nt/Mp[Pt]	Q*Nt/Mp[Pt]

[6] This is the case where the value of the product is not known to the respondent but the quantity is known.

Periodicity	Monthly estimate	Value for the month of the survey	Value for the month of the survey[6]	Net weight for the month of the survey
Semester/Half-year	Division of the multiplication of the transaction value and the number of transactions per semester by the number of months of presence during the semester	Vt*Nt/Mp[Pt]	Q*Vum *Nt/Mp[Pt]	Q*Nt/Mp[Pt]
Year	Division of the multiplication value of the transaction value and the number of transactions per year by the number of months of presence during the year	Vt*Nt/Mp[Pt]	Q*Vum *Nt/Mp[Pt]	Q*Nt/Mp[Pt]

The main limitation is the unavailability of reference prices for goods traded informally. It is essential to use market price surveys and margin calculations carried out by national accounts, but the completeness of prices in relation to the products observed is not guaranteed. It is, therefore, desirable to collect prices directly in the field at the time of collection to determine the minimum and maximum prices of products.

APPENDIX 2: MODEL ICBT DATA COLLECTION QUESTIONNAIRE

SURVEY ON INFORMAL CROSS-BORDER TRADE (ICBT) QUESTIONNAIRE

SECTION A: GEOGRAPHICAL IDENTIFICATION

A1. Questionnaire Number:
……..…..…..|__|__|__|__|

A2. State/Region/Province/County/Department:…… ……..|__|
A3. Municipal/District/Local Government Area: ……..……..……....|__|__|
A4. Region/Customs Office: ……...……
…….....……..……...|__|__|
A5. Name of the Crossing Point: …… …….
……...……..…….....|__|__|

A6. Enumerator's Name:
……...……...……...……...|__|__|__|
A7. Supervisor Name:
……...……...|__|__|__|
A8. Date of Interview: …… ...……...…….....…..|__|__| /
|__|__|/|__|__|__|__|

SECTION B: GENERAL CHARACTERISTICS ON FLOWS

B1. Type of respondent 1-Importer / Exporter 2-Driver / Vehicle Operator 3-Farmer 4-Head porters 5-Breeder 6-Craftsman 7-Others (please specify) …….……	I___I
B2. Gender of the owner of the goods **1.** Male 2. Female	I___I
B3. Age of the owner of the goods	I___I___I
B4. Is the owner living with a disability? **1.** Yes **2.** No	I ___I
B5. Status of importer/exporter 1. Individual 2. Company	I ___I
B6. Mode of transport 1 - Maritime transport 2 - Rail transport	I ___I

3 - Road transport 4 - Inland waterway transport	
B7. Means of transport by road or water 1- Long vehicle (Eg.TITAN) 2- Truck 3- Utility vehicle (covered) 4- Other cars 5- Tricycle 6- Canoe / Boat 7 - Bicycle / Rickshaw / Cart 8 – Motorcycle 9 - Foot / Human 10. Other means of transport	I ___I
B8. Country of registration of the means of transport (please specify) …… I___I___I	
B9. Number of products / Items (list the 10 main products)	I ___I___I

SECTION C: SPECIFIC CHARACTERISTICS OF THE FLOW (THIS SECTION MUST BE FILLED FOR ALL LISTED PRODUCTS)

C1. Product number	I___I___I
C2. Product name	
C3. Product HS code	I___I
C4. Nature of trade flow 1 - Import 2 - Export 3 - Transit	I___I
C5. Nature of the package / Packaging / Detailed description …… …… .	
C6. Nature of the package / Packaging / Unit of measurement 01 UNIT/NUMBER; 02 PAIR; 03 DOZENS; 04 BALL; 05 BARREL/CASK; 06 BASINS; 07 CANS; 08 BOXES; 09 BOTTLE; 10 WOODEN CRATE; 11 CAGE; 12 PICK-UP VAN; 13 TRUCK; 14 EARTHEN VASE; 15 CARTON; 16 PACK; 17 CRATE; 18 LUMBER; 19 BASKET; 20 BAG; 21 BUCKET; 22 ROLLS; 23 PIECES; 24 IN BULK; 25 BUNCH; 26 LOT / BATCH / HEAP; 27 BUNDLE; 28 BOWL; 29 OTHER SPECIFIED	I___I___I
C7. Number / Quantity	I___I___I___I
C8. Net weight (kg)	I___I___I ___I___I___I___I
C9. Currency **1**. Franc of the African Financial Community (FCFA) 2. Naira (N) 3. Cedi 4. Escudo 5. Dalasi 6. Liberian Dollar 7. Guinean Franc 8. Leone	I ___I
C10. Unit value of the product (depending on packaging)	I___I___I___I___I___I___I___I___I___I___I
C11. Country of shipment (To be completed if C4=1 or 3)	I___I___I___I
C12. Country of last known destination (To be completed if C4=2 or 3)	I___I___I___I
C13. Average number of transactions per day for the product	I___I___I___I
C14. Average number of days of activity in a month for the product	I___I___I

SECTION D: OPERATING EXPENSES

D1. Do you pay taxes or incidental expenses in the exercise of your activity? **1.** Yes **2.** No *If no, go to D4*	|___|
D2. Total amount of incidental charges paid per crossing	|___|___|___|___|___|___|
D3. Total amount of taxes paid per crossing	|___|___|___|___|___|___|
D4. Nature of transport used for this crossing 1- Rental 2- Public 3- Private	|___|

SECTION E: TRADE ENVIRONMENT	
E1. Main difficulties encountered (please enter in order of importance from 1 to 4). a. Supply difficulties b. Administrative bottlenecks c. Theft and insecurity d. Inaccessible routes e. Others (please specify) ……...	 |___| |___| |___| |___|
Ask if C4 = 2 or 3 **E2. Main reason for selling the products to other countries** 1. The price is more attractive 2. The quality of the products is appreciated 3. The price-quality ratio is better 4. The country does not manufacture the equivalent 5. The border is closer 6. Others (please specify) ……	|___|
Ask if C4 = 1 **E3. Main reason for buying the products from other countries** 1. The price is more attractive 2. The quality of the products is appreciated 3. The price-quality ratio is better 4. The country does not manufacture the equivalent 5. The border is closer 6. Others (please specify) ……	
E4. Has the product been declared at Customs office? **1.** Yes **2.** No **3.** Don't know	|___|
E5. Have you been interviewed already? **1.** Yes **2.** No	|___|
E6. Have you been interviewed in possession of the same product(s) for the current transaction? **1.** Yes **2.** No	|___|

APPENDIX 3: MODEL PROFILING QUESTIONNAIRE

Principal products: Give as much detail as possible on the product label

Flow: Import, Export, or Transit

Frequency of transaction: Anytime, Regularly, Occasionally, or Seasonally

Department/Province/Region/State: …….....

Municipal:…..

Borough: .....

Village: .....

Crossing point:.....

No.	PRINCIPAL PRODUCTS	FLOW	FREQUENCY OF TRANSACTION
001			
002			
003			
004			
005			
006			
007			
008			
009			
010			
etc.			

APPENDIX 4: LIST OF PEOPLE WHO CONTRIBUTED TO THE DEVELOPMENT OF THE METHODOLOGICAL GUIDE FOR COMPILING THE INFORMAL CROSS-BORDER TRADE

Name	Contact	Country	Designation	Role
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