



CARICOM QUALITY ASSURANCE FRAMEWORK (CQAF) -PHASE II



CARIBBEAN COMMUNITY (CARICOM) SECRETARIAT
JUNE 2022

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**REGIONAL STATISTICS PROGRAMME
CARIBBEAN COMMUNITY (CARICOM) SECRETARIAT**

June 2022

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CARICOM QUALITY ASSURANCE FRAMEWORK –PHASE 2

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ISBN 978-976-600-504-7 (Paperback)
ISBN 978-976-600-505-4 (Internet ed.)

PREFACE

The Caribbean Community (CARICOM) Secretariat, Regional Statistics Programme (RSP) is pleased to present the **CARICOM Quality Assurance Framework (CQAF) - Phase II** publication. As was stated in the Phase I of the CQAF, the process of statistical production in CARICOM is generally conducted in an environment of inadequate resources, juxtaposed with an ever-increasing call for new and wide-ranging statistics such as for the monitoring of the Sustainable Development Goals (SDGs), for which there are 230+ indicators.

As statistical offices attempt to satisfy the needs of users, they must do so while continuing to offer the highest assurance on the quality of the data. The current document compliments the Phase1-CQAF that was published in 2019 and which comprised five key principles of the CQAF – *Quality Commitment (4), Statistical Confidentiality (5), Sound Methodology (7), Relevance (11) and Timeliness and Punctuality (13)*- as an initial starting point in laying the foundation for the very important and rigorous work in enabling quality assurance in statistics production and dissemination across CARICOM countries and at the Secretariat.

The Phase 2 of the CQAF comprises seven (7) principles that include *Impartiality and Objectivity (6), Appropriate Statistical Procedures (8), Non-excessive Burden on Respondents (9), Cost-effectiveness (10), Accuracy and Reliability (12), Coherence and Comparability (14) and Accessibility and Clarity (15)*.

Fundamentally, the goal of the CQAF is to ensure that the statistics produced are ***fit for purpose***. The development of a quality assurance framework for statistics in CARICOM represents a concerted effort by the Standing Committee of Caribbean Statisticians (SCCS) to address the issue of quality in statistics produced and disseminated as a major outcome to be achieved in Member States/Associate Members and within the RSP.

This initiative is reinforced by fairly recent decisions made by CARICOM Heads of Government as follows:

- the endorsement of the Action Plan for Statistics in the Caribbean at the Thirty-Seventh Regular Meeting of the Conference of Heads of Government (HGC) of the Caribbean Community in 2016;

- the endorsement of the preparation of the Regional Strategy for the Development of Statistics (RSDS) by the Thirty-Eighth Regular Meeting of the HGC in 2017, and
- the endorsement of the CARICOM RSDS Strategic Framework as prepared by the SCCS by the Thirty-Ninth HGC in 2018.

Quality Assurance is a strategic objective under the CARICOM RSDS Strategic Framework, situated under the Strategic Priority, Standards and Harmonisation, which seeks 'to advance the production of High Quality, Comparable, national and intra-regional statistics. In addition, the CQAF is grounded in the *United Nations Fundamental Principles of Official Statistics* and in the CARICOM Code of Good Statistical Practices (CGSP).

Therefore, the CQAF represents an important step in, not only promoting greater assurance in the use of statistics compiled by and for the Region, but it should contribute in promoting the sustainability of practices that can ensure continuity in the fulfilling of the mission of providing harmonised, high quality statistics to users. The CGSP questionnaire will continue to be self-administered *every three years* as agreed to by the SCCS, enhanced by a Peer Review System. It should be noted, however, that the Coronavirus disease (COVID-19) has affected the rollout of the peer-review process of the CGSP and the completion of the CGSP 2019/2020 round in its own right.

Given the challenges in the access to resources being experienced by statistical agencies in Member States/Associate Members, the documented guidelines provided in the CQAF can enable, with the support of the CARICOM Secretariat, the implementing of a quality assurance framework in countries. It is anticipated that very small offices can follow and implement the CQAF-Phase 1 with the five principles while better-endowed countries in terms of human and financial resources can go further and attempt the CQAF- Phase 2. Future revisions of the CQAF will incorporate case studies of implementation by NSOs across the Region.

The CQAF will inform the key steps that should be taken to ensure the production of high quality statistics across CARICOM, thereby assuring confidence in the statistical products. It can ensure the sustainability of best practices grounded in quality. The CGSP including the peer-review and the CQAF should together enable high quality CARICOM Statistics that can be recognised and branded for quality.

ACKNOWLEDGEMENTS

The Caribbean Community (CARICOM) Secretariat would like to thank the representatives from Member States, Associate Member States, the CARICOM Advisory Group on Statistics (AGS) and the Standing Committee of Caribbean Statisticians (SCCS) for their contribution in the development of the CARICOM Quality Assurance Framework (CQAF).

The foundation work on the development of a quality assurance system originated under initial work by the Regional Statistical Programme of the CARICOM Secretariat that sought to encourage countries to document their metadata in a standardised format. In addition, the AGS commenced work on measuring the performance of the statistical offices (Director of Statistics of Suriname) and work also continued under the Ninth European Development fund (EDF) on a regional Quality Assurance Framework. The European Union and the Director of Statistics of Suriname deserve special commendation for these efforts.

Special thanks is extended to the staff of the Regional Statistics Programme for the diligent efforts extended towards compiling and publishing this document.

ABBREVIATIONS

AGS	-	Advisory Group on Statistics
ADP	-	Accelerated Data program
CAPS	-	Caribbean Association of Professional Statisticians
CSS	-	CARICOM Statistical System
CARICOM	-	Caribbean Community
CISP	-	Caribbean Integration Support Programme
CGSP	-	CARICOM Code of Good Statistical Practices
CQAF	-	CARICOM Quality Assurance Framework
CoP	-	Code of Practice
CSME	-	CARICOM Single Market and Economy
DQAF	-	Data Quality Assessment Framework
ESS	-	European Statistics System
GDDS	-	General Data Dissemination System
HGC	-	Conference of Heads of Governments
HLF	-	High Level Advocacy Forum
ICT	-	Information and Communication Technologies
IDB	-	Inter-American Development Bank
IMF	-	International Monetary Fund
ISSAR	-	Integrated Statistical System of Administrative Registers
NSDS	-	National Statistical Development Strategy
NSO	-	National Statistical Office
NSS	-	National Statistical System
NSSS	-	National Statistics Submission System
NSWP	-	National Statistics Work Programme
M& E	-	Monitoring and Evaluation
PRASC	-	Project for the Regional Advancement of Statistics in the Caribbean
RSDS	-	Regional Strategy for the Development of Statistics
RSP	-	Regional Statistics Programme
RSWP	-	Regional Statistics Work Programme
SDDS	-	Special Data Dissemination System
SDMX	-	Statistical Data and Metadata Exchange
DQAF	-	Data Quality Assessment Framework
SNA	-	System of National Accounts
SCCS	-	Standing Committee of Caribbean Statisticians
SDGs	-	Sustainable Development Goals
TWG	-	Technical Working Group
UN	-	United Nations

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1. INTRODUCTION

WHAT IS THE CARICOM QUALITY ASSURANCE FRAMEWORK

The Caribbean Community (CARICOM) Quality Assurance Framework (CQAF) is the supporting framework of the CARICOM Code of Good Statistical Practices (CGSP). The CGSP was developed under a Ninth European Development Fund (EDF) project and borrows from the European Statistics System (ESS) Code of Practice (CoP). The CQAF also uses as a basis the Quality Assurance System of the ESS.

The CGSP is based on fifteen (15) principles and is administered through a self-assessment questionnaire. The CARICOM CGSP is grounded in the UN Fundamental Principles of Official Statistics. The CGSP is a vital mechanism to assess quality and good practices in Statistics. The fifteen (15) principles of the CARICOM CGSP are as follows:

A. Institutional Environment

- Principle 1: Professional Independence
- Principle 2: Mandate for Data Collection
- Principle 3: Adequacy of Resources
- Principle 4: Quality Commitment
- Principle 5: Statistical Confidentiality
- Principle 6: Impartiality and Objectivity

B. Statistical Processes

- Principle 7: Sound Methodology
- Principle 8: Appropriate Statistical Procedures
- Principle 9: Non-Excessive Burden on Respondents
- Principle 10: Cost Effectiveness

C. Statistical Output

- Principle 11: Relevance
- Principle 12: Accuracy and Reliability
- Principle 13: Timeliness and Punctuality
- Principle 14: Coherence and Comparability
- Principle 15: Accessibility and Clarity

Rationale

The Forty-Second meeting of the SCCS, held in Cayman Islands 23-25 October 2017, endorsed the recommendation of the Twentieth meeting of the CARICOM Advisory Group on Statistics (AGS) that was held in Paramaribo, Suriname, 19- 23 June 2017, that the CQAF should commence with a small subset of the principles of the CGSP.¹² This approach is being presented in this document as **Phase 1 of the CQAF** and includes the following CGSP Principles:

- Quality Commitment (4),
- Statistical Confidentiality (5)³,
- Sound Methodology (7),
- Relevance (11) and
- Timeliness and Punctuality (13).

The foundation work undertaken by the AGS on the development of the CQAF is presented in the CQAF-Phase 1 publication. The **Phase 2** of the CQAF comprises seven principles (7). Countries that have the capacity to undertake work beyond the CQAF-Phase 1 are encouraged to implement Phase 2 of the CQAF.

The following principles comprise the CQAF-Phase 2:

- Impartiality and Objectivity (6);
- Appropriate Statistical Procedures (8);
- Non-Excessive Burden on Respondents (9);
- Cost Effectiveness (10);
- Accuracy and Reliability (12);
- Coherence and Comparability (14) and
- Accessibility and Clarity (15).

The remaining three Principles, Professional Independence (1), Mandate for Data Collection (3) and Adequacy of Resources while directly impacting data quality are not of the form that can be readily incorporated in a quality assurance framework as they do not directly relate to statistical processes.

¹ A background to the UN Fundamental Principles is presented in the CQAF-Phase I publication.

² The linkages between the CARICOM CGSP, the European CoP, the DQAF, the LAC CoP and StatCan QAF are provided in this Appendix.

³ The 20th AGS recommended four principles and a fifth principle, Statistical Confidentiality was added post the meeting and agreed to subsequently by the AGS.

As mentioned earlier, use was made extensively of the ESS CoP in developing the CARICOM CGSP. Similarly, the ESS QAF was used extensively in formulating the CQAF. While the ESS CoP and the QAF have been revised, a similar revision has not been undertaken to the CARICOM CGSP and the CQAF but a few elements of the CQAF have been changed with reference to the ESS QAF.

The format for the CQAF- Phase 2 publication follows that of the Phase 1 with the presentation of the following for each of the selected principles of the CGSP:

- A brief introduction of the group⁴ containing the principles;
- A brief statement on the principle;
- The **context** of the principle comprising the following:
 - The **indicators** for each principle are listed;
 - The **High Level or Strategic Level** actions that are required to be put in place in developing the system are listed for each indicator;
 - Actions required at the **Operational Level** are listed for each indicator. These actions are the practical activities, procedures and instructions to make operational the framework and to routinize the application of each principle. Essentially the operational level provides information on “how to do it”.
 - A **Checklist of Performance Measurements** is presented for each indicator to enable a quick assessment of key requirements for appropriate application of the principles.

⁴ There are three main groups under which the principles of the CGSP are classified- Institutional Environment, Statistical Processes and Statistical Outputs.

2. QUALITY PRINCIPLES ON THE INSTITUTIONAL ENVIRONMENT

2.1 Introduction

Institutional and organizational factors have a significant influence on the effectiveness and credibility of a statistical authority producing and disseminating national and regional Statistics. The relevant issues are professional independence, mandate for data collection, adequacy of resources, quality commitment, statistical confidentiality, impartiality and objectivity. As mentioned in the introduction, the principles on professional independence, mandate for data collection and adequacy of resources are not statistical processes and therefore these would not form part of the CQAF. In addition, the principles Quality Commitment (4) and Statistical Confidentiality (5) are contained in the CQAF-Phase 1. In what follows, the remaining principle under institutional environment, Impartiality and Objectivity is presented.

2.2 Principle 6 -Impartiality and Objectivity

Statistical authorities must produce and disseminate official statistics in an objective, transparent and professional manner that respects scientific independence and in which all users are treated impartially.

Indicator 6.1 Statistics are produced and disseminated based on a scientific and objective statistical foundation.

High/Strategic Level

1. **Guidelines on impartiality and objectivity:** Guidelines for assuring objectivity, transparency, professionalism and scientific independence in the production and dissemination of official statistics are developed and are made widely available to all stakeholders- staff, of the National Statistical System, respondents that provide data, collaborating partners in the production and analysis of statistics, users and other stakeholders.

Operational Level

1. **Impartiality and Objectivity in Statistical Methodologies:** Concepts, definitions, data sources, methods and processes used in the production and dissemination of statistics should be grounded in scientific statistical principles based on national, regional and International statistical standards. The use of best practices should be transparent and should

be applied in an objective manner.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Guidelines assuring objectivity, impartiality and professionalism and scientific independence.

Indicator 6.2 The use of sources and statistical techniques are based on scientific statistical methods [can be linked to indicator 6.4].

High/Strategic Level

1. **Use of sources and statistical techniques:** The selection of sources and statistical techniques should be based on generally agreed to statistical methods, principles and best practices recognised internationally and in the CARICOM region. Where administrative or non-traditional data sources are used, it should be ensured that these sources are compatible with scientific statistical principles and methods.
2. **Adherence to non-disclosure to all stakeholders:** Non-disclosure of data to all stakeholders should always be adhered to where disclosure will lead to breaches in statistical confidentiality of the data collected by national, regional or international statistical agencies. All users requesting data should be treated equitably. The confidentiality policy in Phase 1, Principle 5 applies.

Operational level

1. **Procedures on the use of sources:** Procedures on the use of sources of statistical data should be in place and disseminated publicly. The criteria for the selection of a specific data source should be developed and should also be made available
2. **Choice of statistical techniques:** The rationale for choosing which statistical techniques should be used in the production and dissemination of statistics should be clearly documented in quality reports that are easily understandable and are widely disseminated in easily accessible formats.
3. **Assessment of statistical techniques and data sources:** There should be regular assessments undertaken to validate the statistical techniques

and data sources to ensure that they are of the requisite quality for use in the production and dissemination of official statistics.

4. Processes to prevent any unauthorized disclosure of personal data:

Processes should be in place to prevent unauthorized identification or disclosure of personal data and to effectively deal with these issues if they occur. The operational procedures in place under Phase 1, Principle 5, Indicator 5.4 would apply.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Documented and publicised procedures on statistical sources
- II. Documented rationale on statistical techniques
- III. Schedule and methodology for assessing data sources and statistical techniques
- IV. Use of operational procedure under Principle 5, Indicator 5.4.

Indicator 6.3 Errors discovered in statistics that have been disseminated are corrected at the earliest possible date and the public notified.

High/Strategic Level

1. **Policy on the Treatment of errors detected in data disseminated:** There must be a clear policy on the treatment of errors when they are discovered.

Operational level

2. **Error declaration and correction:** A procedure should be in place to declare an error when it is discovered in statistics that have been disseminated. The procedure should include information about the error that was detected, and on the corrected value. If the error cannot be corrected by the time the announcement of the error has been made, then information on when the error is expected to be corrected should be provided. All efforts should be made to correct the error in the shortest possible time.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Policy on Error detection/correction;
- II. Template for informing the public about errors.

Indicator 6.4 Comprehensive Information on the concepts, methods and procedures used by the statistical authority are documented and disseminated to the public [can be linked to 6.2].

High/Strategic Level

1. There should be a policy on the documentation and dissemination of metadata in use in the production and dissemination of official statistics inclusive of all concepts, and procedures

Operational level

1. **Dissemination of Metadata:** All published statistical data should be accompanied by relevant metadata.
2. **Transparency of processes:** Production and dissemination practices should be documented and made available to both staff and users.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Template for documenting Metadata (use of SDMX see indicators 9.6,15.1 and 15.5)
- II. Documented Metadata
- III. Schedule for internal and external distribution

Indicator 6.5 Statistical release dates and times are pre-announced.

High/Strategic Level

1. There must be a clear policy governing data dissemination inclusive of specified dates for the release of data.

Operational level

1. **Dissemination of an advance release calendar:** An advance release calendar for the dissemination of statistics should be produced and disseminated. It should indicate what statistics are to be released and at what specific time.
2. **Inability to comply with the advance release calendar:** In the event of changes to release dates of statistics in the advance release calendar,

an announcement on these changes should be made to the public at a minimum time period. A new release date should be issued and the rationale for the failure to comply with the original release date should be part of the announcement.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Advance Release Calendar template
- II. Guidelines for use
- III. Staff Training schedule
- IV. Template for documenting metadata using SDMX

Indicator 6.6 Reasonably advance notice is given on major revisions and/or methodological changes.

High/Strategic Level

1. **Policy exist on need and timing of major revisions/methodological changes:** Statistical Authorities should have a policy on when it is necessary to undertake major revisions/methodological changes in the various series of statistics and the procedures by which this would be done including the publicising of these changes and their impact.

Operational level

1. **Pre-determined periodicity on major revisions/methodological changes:** There should be a pre-determined timeframe for the undertaking of major revisions and methodological changes that should be scheduled based on major changes at the country level as well as changes in regional and international standards.
2. **Clarity of Communication of major revisions/changes:** The Statistical Authority should communicate to the public in a clear and easily understandable format, explanations pertaining to the major revisions and methodological changes that have been made. The impact relative to prior years of data should be clearly explained and procedures and methods for using the new and old data series should be provided.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Guidelines for determining periodicity for major revisions/changes in methodology;
- II. Draft Approach
- III. Template for communicating revisions to the public;

Indicator 6.7 **Equal access by all users to statistical releases at the same time is guaranteed. Any privileged pre-release access to any user external to the statistical authority is limited, controlled and is publicised.**

High/Strategic Level

1. **Impartiality and objectivity in the treatment of users:** A policy on dissemination of official statistics exists that is impartial, objective and professional. The Data Dissemination Policy and other relevant guidelines are widely available including to all users.
2. **System to ensure equal access:** The statistical authority has procedures in place that guarantee the systematic release of statistics to all users in an equitable manner. Where pre-release access is practiced, this process should be made available to the public. In the case of leaks, the system is reviewed and issues addressed to avoid these in the future.

Operational level

1. **Guidelines to ensure equal access:** Guidelines should be documented and shared with staff to ensure that statistical data is being disseminated in an impartial, objective, professional and transparent manner in which all users are treated equitably. Pre-release accesses to specific users should be made known to all users.
2. **Communication to users:** Users are provided with information on the pre-release policy on the various data series.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Guidelines documented on dissemination
- II. Template to inform users
- III. Advance release calends (indicator 6.5)

Indicator 6.8	Statistical releases and statements made in press conferences are objective.
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High/Strategic Level

1. **Policy on the Conduct of Press-releases/Conferences and Issuing of Statements:** There should be a policy on the conduct of Press-releases/Conferences and on the issuing of statements on statistical findings. These must be undertaken in an objective, impartial and professional manner and should be solely based on statistical findings and results. They must be free from politics.

Operational level

1. **Guidelines for press releases and Conferences:** Clear and standard directives should be made available to staff on the format and language to be used in preparing statistical press releases and statements and in conducting Conferences on statistical matters. Press conferences should take place independent of political events and statements issued should be free from political concerns.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Guidelines for press releases, conferences and statements.

3. QUALITY PRINCIPLES ON STATISTICAL PROCESSES

3.1 Introduction

Regional and other international standards, guidelines and good practices must be fully observed in the processes used by the statistical authorities to collect, process and disseminate official statistics. The credibility of the statistics is enhanced by a reputation for good management and efficiency. The relevant aspects are Sound Methodology (7), Appropriate Statistical Procedures (8), Non-excessive Burden on respondents (9) and Cost Effectiveness (10). In the CQAF, Phase 1, Sound Methodology, Principle 7 is included. Therefore, in this Phase, Component B treats with Principles Appropriate Statistical Procedures (8) Non-excessive burden on respondents, (9) and Cost effectiveness (10). Even though these principles come under statistical processes, High Level or Strategic actions are stated where feasible.

3.2 Principle 8 Appropriate Statistical Procedures

Appropriate statistical procedures, implemented from data collection to data validation, must underpin quality statistics.

Indicator 8.1 Where official statistics are based on administrative data, the definitions and concepts used for the administrative purposes must be a good approximation to those required for statistical purposes.

High/Strategic Level

1. **Framework for the use of administrative data:** The Statistical Authority should develop a framework that ensures that administrative data are appropriately used in the production of official statistics.
2. **Distinction between statistical and administrative data processing:** There should be a clear distinction between statistical processing and administrative data processing relative to corresponding validation rules and procedures for checking quality. Administrative data must be used for statistical purposes only implying that it may be necessary to derive new variables, apply different validation and imputation

rules, create new data files and to calculate weights, new aggregates and specific quality checks.

Operational level

1. **Guidelines on the use of administrative data:** Documented guidelines should be produced and made available to all staff to ensure the proper use of administrative data in the compilation of official statistics. These guidelines should include the differences between administrative and statistical processes in terms of definitions, concepts, coverage, etc.
2. **Statistical research into differences in concepts as well as measures to address them:** Statistical research into the differences between the concepts used in statistical processes and administrative data processes should be conducted as required. Equivalence or bridging tables should be developed to ensure effective conversion of the administrative data to the inputs that are required in official statistics.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Guidelines and other documents for the use of administrative data
- II. Schedule for research
- III. Draft approach
- IV. Plan for statistical research into statistical and administrative processes
- V. Bridging/equivalence tables.

Indicator 8.2 In case of statistical surveys, questionnaires are systematically tested prior to the data collection.

High/Strategic Level

1. **Mechanisms for testing questionnaires are in place:** The Statistical Authority should have mechanisms in place to allow for the systematic testing of questionnaires prior to data collection.

Operational level

1. **Guidelines for Piloting of questionnaires:** Questionnaires to be used in censuses and surveys should be comprehensively piloted, including

data collection, processing and tabulations prior to actual data collection.

2. **Procedures for the use of the pilot results:** The results in (1) should be documented and should inform the development of the final questionnaire. It should include a comprehensive analysis of the results of the pilot tests.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Guidelines for pilot-testing
2. Analysis of pilot tests
3. Procedures for using results of pilots

Indicator 8.3 Survey designs, sample selections, and sample weights are robust and are regularly reviewed, revised and updated as required.

High/Strategic Level

1. **Mechanisms exist for the documentation of Survey design/ methodologies and for periodic review of the same:** A survey infrastructure/unit with well-trained and competent staff exists that can undertake a sound and comprehensive survey design programme including, sample design, questionnaire development, data capture method, editing and coding processes, estimation and imputation procedures and the calculation/determination of sampling and non-sampling errors. The documentation, review/updating and publicising of the entire sample design should be undertaken.

Operational level

1. **Survey programme documented and reviewed/updated periodically:** Survey design is comprehensively documented in an easily understandable manner and made available to staff. Schedule for updating of survey design including sample design, data capture approach and editing and coding applications. Staff are trained regularly in survey techniques.
2. **Methodological rules applied in estimation:** The methodological rules applied with respect to estimation methods including imputations/correction for non-response and data calibration should be

transparent and follow established methodological principles. Staff are trained regularly in estimation and imputation procedures.

3. **Measurement and reporting of sampling precision:** Estimations of sampling precision should be undertaken and adequately reported to users
4. **Informing the public of survey methods:** The general public should be informed of the survey design including sample selection and estimation methods.
5. **Harmonised methods for calculating accuracy:** There should be common methods for determining the accuracy of statistical data across statistical datasets that includes documenting of non-sampling errors.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Documented sample design with all related processes-sample design, questionnaire, estimation procedure, sampling/non-sampling error etc.;
- II. Template for informing the public on survey design and related aspects
- III. Schedule for Staff Training
- IV. Monitoring/review system in place for survey framework
- V. Template for reporting sampling precision
- VI. Documented methods for calculating accuracy of statistics

Indicator 8.4 Field operations, data entry, and coding are routinely monitored and revised as required.

High/Strategic Level

1. **Mechanisms exist for monitoring and addressing of issues in the field operations and in data entry and coding:** A survey infrastructure/unit with well-trained and competent supervisory technical staff exists that can effectively monitor the data collection on the field and the data entry and coding of the data collected. A quality assurance plan that monitors the quality of the field operations and the coding of the data should form part of this infrastructure.

Operational level

1. **Application of the checking of the field work on the field and in office:** Procedures for the checking of the data collected by field supervisors are in place and the application of a 100 percent check by the officer receiving the field work immediately upon submission by the supervisor with the flagging of issues to be addressed being undertaken.
2. **Methods and procedures for the coding of data:** The data coding methods and procedures should be documented and easily accessible by relevant staff. There should be 100 percent checks or sample checks on the data coding as deemed necessary. Feedback on the issues identified during the checking of the coding should be communicated to the coders.
3. **Revision of automatic coding methods:** There should be periodic reviews and revision done on automatic coding methods.
4. **Quality indicators related to data collection and coding:** There should be quality indicators related to data collection and coding which should be within the framework of an Operational Quality Assurance Plan. These indicators should be produced and analysed at a specified frequency and the results should be addressed.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Survey Unit in place with well-trained supervisory staff in both the field and the office to monitor the quality of the field work and the coding of the data
- II. Methods and procedures for checking the data- field work and coding with feedback forms for documenting results of checks as required
- III. Operational Quality Assurance Plan that includes issues relating to the quality of the fieldwork and coding of the data.
- IV. Number of staff trained in methods used for field operations, data entry and coding/provided with feedback on checks undertaken
- V. List of quality indicators within Quality Assurance Plan
- VI. Analysis of quality indicators

- VII. Percentage of indicators in place to measure the quality of data collection and coding.

Indicator 8.5 Appropriate editing and imputation computer applications are used and regularly reviewed, revised or updated as required.

High/Strategic Level

1. **Mechanisms exist for the documentation of guidelines, methodologies and examination of the methods used in editing and imputation:** A survey infrastructure/unit with well-trained and competent staff exists that can provide guidelines, recommend appropriate methodologies and periodically examine editing and imputation methods.
2. **Encouraging harmonisation of editing and imputation:** There should be a coordinated effort to promote and share editing and imputation techniques in order to encourage harmonisation among Member States.

Operational level

1. **Analysis of the editing and imputation:** As guided by an Operational Quality Assurance Plan, there should be an analysis of the effect of editing and imputation as part of the assessment of the quality of data collection and processing.
2. **Compliance of editing and imputation techniques with standards:** The methodological rules applied with respect to editing and imputation techniques should follow standard methodological principles and should be clearly documented.

CHECKLIST OF PERFORMANCE MEASUREMENT

- I. Survey Unit in place with well-trained staff in editing and imputation techniques
- II. Operational Quality Assurance Plan that includes guidelines on editing and imputation
- III. Number of staff trained in methods used for editing and imputation methods.

- IV. Documented editing and imputation techniques in electronic and/or printed form.
- V. Document analysing the impact of the applications of editing and imputation on the data.
- VI. Template (electronic or otherwise) for the promotion of sharing of editing and imputation techniques available and in use.

Indicator 8.6 Revisions of statistical series follow standard, well-established and transparent procedures.

High/Strategic Level

1. **Revisions policy with accompanying guidelines, standards and principles:** There should be a policy on revisions that comprise key principles, standards and guidelines relating to the revision of published statistics within a documented methodological framework, which should be routinely applied and made available to users.
2. **Promotion of methodological improvements:** The technical working group established in various statistical areas should promote methodological improvements of revision procedures.

Operational level

1. **Comprehensive explanation of revisions:** All revisions should be accompanied by comprehensive explanations as necessary when the revised data are published.
2. **Quality indicators on revision:** As guided by an Operational Quality Assurance Plan, quality indicators on revisions are regularly calculated in accordance with current standards and made known to users.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Revisions policy with principles, standards and guidelines related to published statistics.
2. Number of presentations made on methodological improvements at regional meetings/workshops.
3. Engagement of relevant TWG with work plan, agenda and achievements.
4. Number of quality indicators on revisions calculated and published.

5. Comprehensive explanations disseminated to users.

3.3 Principle 9 Non-Excessive Burden on Respondents

The reporting burden should be proportionate to the needs of the users and should not be excessive for respondents. The statistical authority monitors the response burden and sets targets for its reduction over time.

Indicator 9.1 The range and detail of official statistics demands is limited to what is absolutely necessary.

High/Strategic Level

1. **Priorities for CARICOM Statistics:** The priorities for statistics in the CARICOM region shall be set at the level of the Standing Committee of Caribbean Statisticians and will be guided by national, regional and international development frameworks and goals while also taking into account the burden on respondents.
2. **Verification of the response burden and level of details:** Analysis of policies and programme being implemented under the CARICOM Single Market and Economy (CSME) should be carried out from time to time to verify the level of details of variables that will be required in statistical datasets and the resulting response burden.
3. **Assessment of the CARICOM Regional statistical Work Programme (RSWP):** Periodic assessment should be undertaken of the RSWP in comparison to the National Statistics Work Programmes (NSWP) of countries, using the monitoring and reporting framework that has been developed for this purpose. The assessment should also seek to eliminate redundancy within the RSWP and NSWPs.

Operational level

1. **Analysis of the needs for statistical information:** The needs for statistics in the context of the CSME and for national and other regional plans and priorities as well as international requirements should be analysed in terms of the level of details required. Adjustments are then made relative to the data to be supplied by respondents.
2. **Review of response burden.** The burden on respondents should be regularly reviewed in a standardised way, such as the length of time it

takes to complete a questionnaire, frequency of a household/business falling in a continuous sample survey.

3. **Procedures to use alternative data sources:** Procedures are documented to reduce respondents' burden through the use of alternative data sources, such as rotation in sampling and use of alternative data sources such as administrative data and Big data including web-scraping.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Assessment report on national, regional and international statistical needs/priorities;
2. Assessment report on the RSWP and NSWPs.
3. Report on statistical need/priorities on response burden
4. List of/frequency of use of alternative data sources that reduce respondents' burden.

Indicator 9.2 The reporting burden is spread as widely as possible over survey populations through appropriate sampling techniques.

High/Strategic Level

1. **Mechanisms for feedback on reporting burden:** There should be mechanisms in place to obtain feedback on reporting burden on a regular basis.
2. **Action plans for simplification/modernisation of surveys:** Action plans should be developed for the simplification/modernisation of survey data collection in order to decrease the burden on respondents.
3. **Performance indicators on reporting burden:** Performance indicators on reporting burden should be periodically produced and analysed.
4. **Use of statistical sampling methods:** Direct survey collection should make use of sampling methods that will ensure that the reporting burden does not fall on particular categories of respondents unnecessarily.

Operational level

1. **Reduced reporting burden:** Appropriate sampling design techniques should be used in survey data collection to reduce reporting burden for example using coordinated sampling.
2. **Calculation of the reporting burden:** The reporting burden should be calculated for the time needed to answer the survey questionnaire, to retrieve the required information and to obtain responses to sensitive questions.
3. **Limitation of size of survey questionnaires:** Questions used to collect information which will not be published should be limited and justified.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. User feedback form in place to evaluate reporting burden
2. Action plan to outline proposals to reduce respondents' burden.
3. Report on the percentage of reporting burden reduced as a result of implementation of appropriate sampling design techniques.
4. Number of performance indicators on reporting burden calculated and published.

Indicator 9.3 The information sought from businesses is, as far as possible, readily available from their accounts and electronic means are used where possible to facilitate its return.

High/Strategic Level

1. **Manuals and technical tools:** Available manuals and software solutions should be explored to increase the use of electronic means of data collection.

Operational level

1. **Electronic data submission protocols in place:** As far as possible, there should be a process in place to facilitate the return of readily available data from businesses via electronic means.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Number of areas where electronic data submission protocols are in place.

Indicator 9.4 Best estimates and approximations are accepted when exact details are not readily available.

Operational level

1. **Best estimates and approximations:** Efforts should be made to use best estimates and approximations from alternative data sources when exact details are not readily available, or where it poses an undue burden on respondent. This should be done in consultation with countries if this data are to be publicly disseminated as opposed to internal use.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Percentage of data sources that account for alternative data sources other than the main survey e.g. percentage of administrative sources used in data compilation.

Indicator 9.5 Administrative sources are used whenever possible to avoid duplicating requests for information.

High/Strategic Level

1. **Tools to increase the use of administrative sources:** Statistical Offices should make use of available manuals and other tools geared towards increasing the use of administrative data sources to meet statistical needs.
2. **Enhancing collaboration to obtain administrative data:** Mechanisms to enhance the collaboration with public and private institutions holding administrative and/or Big data should be developed (e.g. appropriate arrangements, development of modules, national legislation or agreements if necessary).
3. **Legal obligation to provide administrative data:** The Statistical Acts

within Member States/Associate Members should be revised or updated to enable compliance by administrative data providers and should provide a clear understanding of their responsibilities in providing information for statistical purposes only.

Operational level

1. **Access to Documentation on the availability and quality of administrative sources:** All staff especially in the survey section should have access to documentation on the availability and quality of administrative sources.
2. **Software applications for the collection of administrative data:** Available software applications for the collection of administrative data for statistical purposes such as the **CARICOM Integrated Statistical System of Administrative Registers (ISSAR)** should be implemented.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Number of Agreements/MOUs in place to collaborate with public and private institutions holding administrative data
2. Software applications in place for the collection of administrative data e.g. ISSAR/SDMX-based
3. Clause in place in Statistical Acts enabling the collection of administrative data from the relevant data providers.

Indicator 9.6 Data sharing within statistical authorities is generalised in order to avoid multiplication of surveys.

High/Strategic Level

1. **Data Sharing Agreements/MOUs exist:** Efforts should be made to develop and implement data sharing agreements within statistical authorities and other data collection agencies to avoid duplication of efforts.

Operational level

1. **Implementation of Software tools for data sharing:** Software tools for data sharing within the CARICOM Statistical System (CSS) and the

National Statistical System (NSS) should be implemented. e. g. SDMX-based data collection systems , ISSAR, National Statistics Submission System (NSSS) application or reconciliation of these.

2. **Establishment, implementation and maintenance of a Master Data Register:** As recommended by the CARICOM Regional Data Policy, a Master Data Register should be established, implemented and maintained for identifying and cataloguing the categories, subcategories and datasets that represents official statistics including archived data.
3. **Agreement on format and content of data:** There should also be agreement among the data producing agencies on the format and content of data, including the level of granularity and details required, as reflected in the policy prepared by the Standing Committee of Caribbean Statisticians (SCCS) on Access to Micro data.
4. **Sharing of data archives:** Data archives should be shared among data producing agencies when useful and in compliance with confidentiality policies.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Software Applications for data collection
2. Existence of Master Data Register
3. Number of data sharing agreements within statistical authorities existing.
4. Policy on Access to micro data
5. Number of data archives that have been shared among data producing agencies
6. Software applications reconciled/SDMX-based

3.3 Principle 10: Cost effectiveness

Resources must be effectively used.

Indicator 10.1	Internal and independent external measures monitor the statistical authority's use of resources.
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High/Strategic Level

1. **Monitoring and Evaluation Framework of human and financial resources:** Indicators of human and financial resources should be regularly monitored by the statistical authorities.
2. **Financial resources available to statistical processes:** Representation should be made by NSOs for the allocation of required resources to statistical processes based on the annual work programmes.
3. **Costs of data production:** The costs of statistics at each phase of data production should be calculated

Operational level

1. **Staff opinion surveys:** Staff opinion surveys should be conducted regularly.
2. **Procedures to calculate ex-ante costs:** Directives should be made available on the procedures to calculate ex-ante costs for statistical processes.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. M&E report available on human and financial resources
2. Annual Work Programme and Budgets
3. Existence of Performance review systems
4. Results of staff opinion surveys
5. Estimates of costs of statistics production

Indicator 10.2	Exploitation of the use of IT in statistical production and dissemination.
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High/Strategic Level

1. **Develop and implement an IT architecture and strategy:** An IT architecture and strategy in the production and dissemination of statistics have been developed and implemented.
2. **Promote the automation of the key data production activities:** Policies and corresponding procedures and tools are in place to promote greater automation in statistics production such as the use of Computer Assisted Personal Interviewing, automated coding and data validation
3. **Promote the use of data scientists:** The training of statisticians as data scientists can to enable greater exploitation of IT in statistics production including Big data manipulation

Operational level

1. **Automation of data production operations:** Implement electronic data capture, processing with automated coding.
2. **Implement training programme:** to facilitate training of statisticians as data scientists

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Existence of devices, applications and skilled personnel that automate data production operations
2. Training programme
3. Software applications
4. Analysis of the use of IT in reducing costs of statistical production and dissemination

Indicator 10.3	Promote the use of administrative data using IT to reduce cost from using surveys.
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High/Strategic Level

1. **Establishment of policy, procedures on access use of administrative data:** Prepare a data policy and procedures for optimising the access to administrative data that can result in a reduction of cost based on work put in place under principle 9.

Operational level

1. **Administrative data to supplant as a key source of data:** Determine the statistics production areas that can benefit from the availability of administrative data that can be electronically accessed.
2. **Data Linkages:** integrated approaches to administrative data are actively pursued.
3. **Data Quality:** Procedures are developed to assess quality of the administrative data.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Administrative data Policy
2. Percentage of budget allocated towards admin data access/.survey data over time.
3. Administrative data quality assessment report
4. Data linkages tools

Indicator 10.4	Statistical authorities promote, share and implement standardised solutions that increase effectiveness and efficiency
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High/Strategic Level

1. **Standardised approaches in the production and dissemination of statistics:** Within the framework of the common RSWP, develop standardised processes in the production and dissemination of statistics.

2. **Sharing of standards, tools and procedures:** Mechanisms to develop solutions and to share tools including IT solutions, methodological procedures developed nationally or through the TWG.

Operational level

1. **Preparation of standardised processes:** Action Plan prepared identifying processes that have been standardised and which can be shared including those prepared by TWGs.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. List of processes standardised national /TWG
2. Action Plan
3. List of processes shared

4. COMPONENT C- STATISTICAL OUTPUTS

Available statistical outputs must meet users' needs. Statistics comply with quality standards and serve the needs of official institutions, governments, research institutions, business concerns and the public generally. The important issues concern the extent to which the statistics are relevant, accurate and reliable, timely, coherent, comparable across regions and countries, and readily accessible by users. The principles, Relevance (11) and Timeliness and Punctuality (13) are included in the CQAF_Phase1. Therefore, the principles that are included in the Phase 2 are Accuracy and Reliability (12), Coherence and Comparability (14) and Accessibility and Clarity (15).

4.1 Principle 12: Accuracy and Reliability

Official Statistics must accurately and reliably portray reality.

Indicator 12.1	Source data, intermediate results and statistical outputs are assessed and validated.
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High/Strategic Level

1. **Systems for assessing and validating data:** Systems for assessing and validating source data, intermediate results and statistical outputs developed and implemented.

Operational level

1. **Guidelines for validation techniques:** Guidelines and procedures for ensuring the accuracy and reliability of statistical outputs have been documented and implemented.
2. **Accuracy and Reliability measurement and assessment:** Quality indicator(s) on accuracy and reliability developed and regularly assessed.
3. **International recommendations on quality reporting:** Quality reporting on accuracy should be guided by established international recommendations for quality reports.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Periodic assessment reports on the quality of source data, intermediate results and final statistical outputs.
2. List of indicator(s) on accuracy and reliability
3. Checklist developed with international recommendations on quality reporting
4. Quality reports on accuracy

Indicator 12.2	Sampling errors and non-sampling errors are measured and systematically documented.
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High/Strategic Level

1. **Procedures and guidelines to measure and reduce errors:** Procedures and guidelines to measure and reduce sampling and non-sampling errors are documented and should incorporate the following activities:-
 - The identification of the main sources of sampling (selection, size sampling variability) and non-sampling errors, (coverage, non-response, defects in questionnaire concepts etc.) in statistical processes;
 - The quantification of sampling errors for key variables and the identification and evaluation, in quantitative or qualitative terms, of the potential bias and additional variance due to non-sampling errors;
 - The methods for the correction and adjustment of the errors as well as the analysis of differences between preliminary and revised estimate;

Operational level

1. **Methods and tools for preventing and reducing errors:** Methods and tools for preventing and reducing sampling and non-sampling errors should be implemented as part of the statistical processes.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Procedures/ Guidelines to reduce errors published;
2. Documentation of steps to prevent/reduce sampling and non-sampling errors

Indicator 12.3	Studies and analyses of revisions are carried out routinely and used internally to inform statistical processes.
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High/Strategic Level

1. **A Revision policy:** A revision policy describing principles and procedures should be developed and made available to all staff. (See Principle 8)

Operational level

1. **Publication of explanations on revisions:** The explanation of revisions to datasets should be published and include details on the nature of the revision, actual methods used, timing of revisions and reasons for the revision.
2. **Compliance of the revision policy with standardised guidelines:** The implementation of the Revision policy should follow standardized and transparent guidelines established in each broad area of statistics.
3. **Information on the size and direction of revisions for key indicators:** Information on the size and direction of revisions for key indicators should be publicly disseminated.
4. **Use of analysis of revisions:** Revision studies should be periodically carried out to improve the statistical process, incorporating lessons learnt to adjust the production cycle.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Frequency of updates to the explanation on revisions to datasets
2. Frequency of publication of revision studies

4.2 Principle 14: Coherence and Comparability

Official Statistics should be consistent internally, over time and comparable between regions and countries; it should be possible to combine and make joint use of related data from different sources.

Indicator 14.1 Statistics are internally coherent and consistent.

High/Strategic Level

1. **Procedures and guidelines to monitor internal coherence:** Procedures and guidelines should be developed to monitor internal coherence keeping in mind the following areas:
 - Consistency between preliminary and final data
 - Consistency between microdata and aggregated data
 - Consistency between annual, quarterly and monthly data
 - Consistency between the System of National Accounts and other related statistical systems.

Operational level

1. **Develop guidelines to ensure logical combination of outputs from complementary sources:** Step-by-Step guidelines should be developed and made available to ensure that outputs obtained from complementary sources are combined so as to assure internal coherence and consistency.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Internal validation report on any inconsistencies between/among related statistical datasets
2. Guidelines on combining outputs from complementary sources produced

Indicator 14.2	Statistics are coherent or reconcilable over a reasonable period of time.
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High/Strategic Level

1. **Policy to update concepts, definitions and classification systems:** Whenever there are updates to the International concepts, definitions or classifications systems in use, there should be a policy in place that will ensure that the relevant updates are undertaken within a reasonable time period.

Operational level

1. **Identification and measurement of changes in methods:** Whenever there are changes in methods, it should be clearly identified and explained as part of published data and their impact should be measured to facilitate reconciliation.
2. **Publication and explanation of breaks in time series:** The reasons for breaks in the statistical series should be clearly explained and made public. Additionally, the methods for reconciliation over a period of time should be clearly explained and published.
3. **Methods used to link data series containing breaks:** Methods used to link data series containing breaks should be documented, explained and should be included as notes/explanations when the data are released.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Length of time taken to update International concepts, definitions or classifications systems in use
2. Frequency of updates to published methodologies in each area of statistics.
3. Published reconciliation methods
4. Include methods used to link data series in the publication of the data

Indicator 14.3	Statistics are compiled on the basis of common national, regional and international standards with respect to scope, definitions, units and classifications in the different surveys and sources.
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High/Strategic Level

1. **Setting up a registry of common definitions and concepts:** Efforts should be made to set up a registry of common definitions and concepts to ensure that there is consistency in the compilation of statistics. Some past efforts exist in CARICOM with the documenting of the concepts of specific areas of statistics. This should however be done in a standardised format and use of the SDMX should be instrumental

Operational level

1. **Quality Reporting on compliance with standards:** As part of the Operational Quality Assurance plan, periodic assessments of compliance with international and regional standards on definitions, units and classifications should be carried out and reflected in quality reporting.
2. **Reasons for deviation from standards explained:** Whenever there are deviations from standards on definitions, units and classifications, it should be clearly stated and the reasons for deviating should be clearly explained.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Quality reports
2. Existence of registry of common definitions and concepts
3. Frequency of periodic assessment report on compliance
4. Number of cases of deviations from international standards

Indicator 14.4	Statistics from the different surveys and sources are compared and reconciled.
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High/Strategic Level

1. **Directives on reconciliation of statistical output among different sources including surveys:** Clear guidelines should be compiled and

published on the methods of comparing and reconciling statistical output compiled from different surveys and sources.

Operational level

1. **Comparison of statistical output among different sources:** The compilation of statistical output should include comparing these specific outputs with other statistical or administrative data that provide the same or similar information.
2. **Identification and explanation of divergences:** In cases where statistics are published using different sources, any divergences that arises among statistical datasets due to the different sources should be clearly identified and the corresponding explanations should be published as well.
3. **Reconciliation of statistical outputs:** Statistical outputs should be reconciled whenever possible.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Existence of published guidelines on comparing and reconciliation of statistical outputs
2. Frequency of publication of divergences among statistical datasets due to differences in sources.
3. Number of cases of reconciliation among statistical outputs.

Indicator 14.5	Cross-national comparability of the data is ensured through periodical exchanges between the Official statistical system and other statistical systems.
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High/Strategic Level

1. **Institutionalisation of assessment of comparability:** Mechanisms should be developed including guidelines to ensure the institutionalisation of periodic assessments of comparability.
2. **Cooperation in methodological studies:** The Regional Statistical Office should coordinate the conduct of methodological studies among Member States

3. **Assessment on the comparability of data:** Periodic assessments should be done by the Regional Statistical Office on the comparability of data among Member States by reviewing quality reports and other such documents.

Operational level

1. **Analysis of asymmetries:** In comparing data among Member States, asymmetries should be done where possible and reports on mirror statistics between Member States should be made public.
2. **Identification and corrections of discrepancies in mirror statistics:** The discrepancies in mirror statistics should be identified and corrected whenever possible.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Number of published assessments of comparability of data among Member States
2. Number of published methodologies studies among Member States
3. Number of published mirror statistics studies.

4.3 Principle 15: Accessibility and Clarity

Official statistics should be presented in a clear and understandable form; disseminated in a suitable and convenient manner; available and accessible on an impartial basis, with supporting metadata and guidance.

Indicator 15.1 **Statistics are presented in a form that facilitates proper interpretation and meaningful comparisons.**

High/Strategic Level

1. **A Dissemination Policy:** A dissemination policy should be developed covering all aspects of dissemination including format, layout, archiving etc. This policy should be made public.
2. **Procedures to review dissemination standards:** Procedures and guidelines should be developed to systematically and periodically review the standards for the dissemination of statistical datasets to ensure they are **up-to-date and adequate**.

3. **Policy for archiving statistics and metadata:** Member States should make use of the CARICOM Regional Data Policy, which includes a chapter on archiving statistics and metadata. Further, given that the RSP has been able to undertake some training on Statistical Data and Metadata eXchange -SDMX (through the Government of Italy) - this framework should guide the collection, storage, archiving and presentation of data and metadata.

Operational level

1. **Comparisons included in analytical publications:** Analytical publications should include meaningful and relevant comparisons where appropriate.
2. **Consultations of users about dissemination:** Consultations among users using various formats should be regularly carried out to determine the most appropriate forms of dissemination including customer satisfaction surveys, focus groups, webinars, etc.
3. **Establishing of a Technical Working Group (TWG) on Communication and Website Dissemination:** A Technical Working Group on Communication and Website Dissemination should be established that can sustainably build capacity in the effective dissemination and communication of statistical results. The conduct of training courses (and through the CARICOM e-CISTAR - CARICOM Institute for Statistical Training and Research platform) for data analysis, press releases, communication of statistics and data analysis and other related areas should be undertaken periodically.
4. **SDMX promotion:** Relative to the data dissemination and archiving processes that come at the end of data collection, processing etc., the use of SDMX should be implemented at the very early stages.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Existence of published dissemination policy
2. Number of reviews completed to examine the standards for the dissemination of statistical datasets
3. User Survey Forms/online forms;
4. Technical Working Group

5. Training Programme including through e-CISTAR platform
6. Number of staff members trained in statistical data analysis and writing of press releases.
7. CARICOM Data Policy with emphasis on SDMX

Indicator 15.2	Dissemination services use modern information and communication technology and, if appropriate, traditional hard copy.
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High/Strategic Level

1. **Website and online statistical databases' conformity with universal guidelines:** The website and statistical databases conform as far as possible to universal web content accessibility guideline, where feasible. In this regard, a content management system is the basis of the RSP website being redesigned.

Operational level

1. **Use of website and online statistical databases for dissemination:** The main means of disseminating statistical information should be by way of websites and online statistical databases with user-friendly data visualisation tools.
2. **Online Helpdesk/Knowledgebase Centre:** Efforts should be made to establish an online Helpdesk/Knowledgebase Centre to assist the general public through various means. In this regard the CARICOM e-CISTAR- platform (CARICOM Institute for Statistical Training and Research) comprises an online knowledgebase that would have guidelines etc. with a public and a private element.
3. **A publications catalogue:** A publications catalogue is available to users
4. **Facilitation re-dissemination:** Efforts should be made to disseminate statistical results using tools and formats that facilitate re-dissemination by such media as ready-made tables, charts, maps connected to statistics.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. State-of-the-art website and user feedback on dissemination products on website
2. Existence of online helpdesk/knowledgebase
3. Number of visualization tools on website
4. Publications catalogue

Indicator 15.3 Custom-designed analyses are provided when feasible and are made public.

High/Strategic Level

1. **Communication about the possibility and terms of custom-designed analyses:** The possibility and terms of custom-designed analyses should be clearly communicated.
2. **Provision of custom-designed outputs:** The dissemination policy should include guidelines on requesting custom-designed outputs.

Operational level

1. **Publication of custom-designed analysis:** Where possible, efforts should be made to publish custom-designed analyses.
2. **Forum for making requests for custom-designed analyses:** Statistical websites should include information regarding how to make requests for custom-designed analyses.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. The existence of appropriate methods to make requests for custom-designed outputs e.g. email, telephone etc.
2. Number of requests for custom-designed outputs.
3. Number of publications with custom-designed analyses.

Indicator 15.4 Access to microdata can be allowed for research purposes. This access is subject to strict protocols.

High/Strategic Level

1. **Policies, agreements and protocol with respect to microdata:** Microdata should only be provided on the basis of a formal agreement between the parties that clearly outlines the terms of use of the data, and expectations with regard to protection. In the case of CARICOM that comprises countries with very small populations, such access is not recommended. For example, for the detailed trade dissemination there is agreement by the SCCS using a two-tier system, which governs this process while for the Census, the detailed census files are made available by countries to the Secretariat but the detailed data are not given out. Tabulations can be processed by users. Backing the census data is a process of anonymisation that also impacts the tabulations.
2. **Training in data Anonymisation:** It is the experience of the RSP that affording training in the anonymisation of microdata so that they can perform this task for themselves can assist in the release of such data, at least to the Secretariat and perhaps to special entities that would use it for research purposes only.

Operational level

1. **Establishment of facilities to access microdata in a secure environment:** Statistical Offices should seek to establish a secure environment either remotely or on site within the office (e.g. microdata lab) from which researchers can again access to microdata. Appropriate controls should be in place for microdata access either remotely or on site.
2. **CARICOM Policy on Access to Microdata:** The CARICOM policy on access to Microdata should guide the release of this data. This policy should periodically be reviewed to incorporate up-to-date processes relative to data anonymisation and similar techniques that can be used.
3. **Conduct of training in data anonymisation:** This training, which should be hands-on, should be done periodically.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Number of formal agreements in place with respect to access to Microdata.
2. CARICOM Policy on access to Microdata.
3. Published protocols for the provision of microdata.
4. Existence of the microdata lab or similar facilities.
5. Training programme in data anonymization.

Indicator 15.5 Metadata are documented according to standardised metadata systems.

High/Strategic Level

1. **Documented procedures for updating and publishing metadata:** There should be documented procedures available to all staff on the process updating and publishing metadata. The SDMX already referred to under 15.1 is a fundamental part of this process.
2. **Conformity of metadata to international and regionally agreed to standards and guidelines:** Statistical Offices should structure and format their metadata according to established standards and guidelines established and agreed upon at the Regional level.
3. **Metadata independent of the format of publication:** Procedure in place to ensure that metadata for statistical datasets are made available independent of the format of publication(e.g. web, hard copies)

Operational level

1. **Dissemination of statistical results and metadata:** All Statistical datasets should be disseminated along with the respective metadata allowing for a better understanding of the results.
2. **Use of SDMX:** The use of SDMX should be engineered by the RSP so that countries would have a uniform process for not only exchanging data and metadata but also in the design for their in-house databases.
3. **Availability of Help on Metadata issues:** An online helpdesk should be available incorporating live chat features to assist users wishing to clarify metadata issues.

4. **Training courses for staff on metadata:** All staff should receive training in metadata documentation for their respective areas.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Published metadata on statistical datasets.
2. Number of staff members trained in metadata documentation
3. Online helpdesk in place
4. Number of datasets with metadata disseminated.
5. SDMX implementation at the RSP and across Member States

Indicator 15.6 Users are kept informed on the methodology of statistical processes and the quality of statistical outputs.

High/Strategic Level

1. **Institutionalising the production of quality reports and methodological documents:** As part of regional and national work programmes, efforts should be made to institutionalise the regular production of standardised up-to-date user oriented quality reports and methodological documents.

Operational level

1. **Ensuring publication of quality reports and methodological documents:** There should be a standard practice to publish quality reports and methodological documents to relevant websites.

CHECKLIST OF PERFORMANCE MEASUREMENT

1. Number of quality reports produced